ABSTRACT OF

The Goulstonian Lectures

ON

THE SUPRA-RENAL BODIES.

Delivered before the Royal College of Physicians of London on March 19th, 21st, and 26th, 1895,

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LECTURE I.

Delivered on March 19th.

ANATOMY, HISTOLOGY, AND MORBID ANATOMY OF THE SUPRA-RENAL CAPSULES.

AFTER thanking the College for the honour conferred upon him the lecturer described the most satisfactory method of exposing and removing the supra-renal capsules from the body after death, and laid stress on taking them out before, not with, the kidneys. The exact anatomical position and relations of the organs were then described. These organs lay not on the top of the kidneys, but at their upper and inner borders, reaching down to the hilum of the kidney. The right supra-renal body lay under the inferior vena cava along its inner border, and was for a varying extent in direct contact with the hepatic flexure of the duodenum. The oblique undulation in the right supra-renal body was described and compared with its vertical direction on the left side. The difference in the conformation of the two bodies was explained as being a result of the different pressures to which they respectively were exposed. The kidneys and supra-renal bodies were of the same size at the third month of intra-uterine life; at the sixth month the kidneys were twice and at birth three times the size of the adrenals. In adult life the relation was 44 to 1. There was no evidence to show that the supra-renal bodies in negroes were larger than in white men. Abnormal processes in connexion with the supra-renal body were mentioned. The absence or atrophy of these organs in hemicephaly and anencephaly was referred to. Accessory supra-renal bodies were commonly found, if looked for in the connective tissue around the main organ; they also occurred in the solar plexus, along the spermatic vessels, and in the broad ligament of the uterus. Structurally the smaller accessory supra-renal bodies were composed of the cortical substance, the larger of cortex and medulla. Accessory supra-renal bodies embedded in the kidney, and more rarely in the liver, were called "rests." In the kidney these "rests" appeared (1) as multiple round nodules which might be so fatty as to be called renal lipomata; (2) as single expanded plaques met with on the surface of the upper part of the kidney, where the pressure of the liver or spleen produced flattening.

HISTOLOGY OF THE SUPRA-RENAL BODIES.

A brief account of the three zones of the cortex was given. The zona reticularis of the cortex could not be sharply marked off from the medulla; its cells stained brown with chromic acid and contained a varying amount of pigment. Canalis had observed mitosis in the cortex, but never in the medulla. Dr. Hill of Cambridge had kindly informed the lecturer that from the active mitosis he had observed in the zona reticularis it was probable that cell multiplication occurred here in adult life. Fatty change in the cortex was normal in adult life and was always much more marked than in the medulla. The cells of the medulla stained brown with chromic salts, but this reaction gradually diminished, until twelve hours after death it had disappeared. Stilling had called these cells "chromophile," and had met with similar ones in the sympathetic and intercarotid gland of animals. Manasse had described a hyaline material in the veins of the medulla which was derived from the adjacent cells. Auld had described the medulla as a tubulo-alveolar gland with colloid material in its acini. The presence of ganglion cells in the medulla was discussed, and the conclusion was that there probably were some present. The relation of the cortex and medulla was next considered. The current view was that they were developmentally, structurally, and functionally distinct. The medulla embryologically was connected with the sympathetic and the cortex with the mesoblast or Wolffian body. Creighton's observations on the homologies of the supra-renal bodies, however, pointed to the cortex and medulla forming a functional whole, and this view the lecturer was inclined to adopt on histological grounds. Quite recently, however, Schäfer and Oliver[1] had shown that the medulla alone contained the active principle of supra-renal extract.

VARIOUS MORBID CONDITIONS OF THE SUPRA-RENAL BODIES.

The lecturer said that, though a sketch of the physiology would naturally come next, it was more convenient to refer to the chief lesions of morbid anatomy attacking them before considering the function of the supra-renal bodies, since that subject was so closely connected with the explanation of Addison's disease. Some degree of atrophy was normal in old age, but apart from this atrophy occurred occasionally earlier in life, and when extreme it was sometimes the cause of Addison's disease. The lecturer in an examination of 1050 bodies had noticed atrophy under the age of forty-five years on six occasions; in none of them was the atrophy so extreme—viz., to the size of peas—as had been described in some cases of Addison's disease; in none of these cases were the symptoms of Addison's disease present. Hæmorrhage into the supra-renal bodies was occasionally spontaneous, but was more frequently traumatic. Dr. Spenser had shown visceral hæmorrhages at birth to be far from uncommon. In 130 stillborn children he had found hæmorrhages into the medulla of the supra-renal in 24; half of them were bilateral. These hæmorrhages were more common in difficult labours. The after-result of such hæmorrhages might possibly lead to atrophy of the organ. After referring to cloudy swelling, the lecturer quoted Dr. Attlee's recent, as yet unpublished, work on Fatty Changes in the Supra-renal Bodies of Children. In wasting children the supra-renal bodies were extensively occupied by fat; they were more constantly affected than the liver. In stillborn children the amount of fat was very moderate; in infants dying from diseases other than marasmus the fatty change was never so marked as in marasmus. Experimentally Attlee found that starvation, suppuration, and poisoning led to marked steatosis. The question whether the change was of the nature of a degeneration or of an infiltration was discussed. The lardaceous change attacked the vessels on the cortex of the organ. The medulla might be affected to a lesser degree. In 15 cases of marked lardaceous disease the supra-renal bodies were affected eight times. Cysts might be due to hæmorrhages, to ecchinococci, or possibly to softening of adenomata, but were rare. Tubercle occurred comparatively often in the supra-renal bodies. In 1050 necropsies death was found to be due to tubercle in some form or other in 131 cases, and in 18 of these caseous material was found in the supra-renal bodies. There seemed to be an immunity on the part of the supra-renal bodies from tubercle during the first years of life.

—	Years. 1 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	Total
Cases of tubercle	23	17	29	29	17	10	5	1	131
Number of cases in which caseation or tubercle was present in the supra-renals	0	5	2	6	1	2	2	0	18

Chronic tuberculosis always began in the medulla.

SIMPLE TUMOURS.

Adenomata were of two kinds: (1) small multiple yellowish nodules on the cortex composed of the cells of that region, showing marked fatty change; (2) large single tumours arising from the cortex, magnified editions of the former. They had been called hyperplastic tumours, struma lipomatosa supra-renalis, or supra-renal goitre. On the analogy of exophthalmic goitre symptoms might have been expected to be connected with these supra-renal adenomata. The extreme fatty change showed that they were probably inactive, and this, together with the apparent functional

[1] Proceedings of the Physiological Society, March 16th, 1895.

inactivity of the cortex from which they arose, accounted for the absence of any symptoms. Exceptional tumours, such as angeioma and ganglionated neuroma, had been recorded as occurring in these organs.

MALIGNANT TUMOURS.

Both sarcomata and carcinomata occurred primarily; the former were the commoner, and showed a marked tendency to the formation of hæmorrhagic cysts and of necrosed areas. Supra-renal "rests" in the kidney might take on malignant growth, and thus give rise to a renal sarcoma. In the same way some primary sarcomata of the liver might be explained. Secondary carcinomata and sarcomata were occasionally found. Out of sixty-three cases of carcinoma of various parts of the body, the lecturer had found secondary growths in the supra-renal bodies in seven cases. Dr. Norman Moore had recorded three secondary growths in 102 cases of carcinoma. In twenty-four cases of sarcoma secondary growths were noted by the lecturer twice. Dr. N. Moore's figures were twenty-one cases of sarcoma with five secondary growths, of which two were described as endothelioma secondary to primary growths in the heart.

LECTURE II.

Delivered on March 21st.

PHYSIOLOGY OF THE SUPRA-RENAL BODIES.—MORBID ANATOMY OF ADDISON'S DISEASE.

The earliest researches were those of Brown-Séquard. By removing the adrenal bodies and observation of the results he came to the following conclusions: (1) that these organs are essential to life; (2) that they modified or destroyed a substance which otherwise transformed itself into pigment; (3) that when the organs were destroyed or removed this substance collected in the blood; (4) that removal was rapidly fatal, and that injection of the blood of an animal thus killed into a healthy animal led to symptoms like those of removal. Gratiolet, Phillippeaux, and G. Harley repeated these experiments and came to the conclusion that the supra-renal bodies had no special function, and that the fatal results were due to peritonitis, hepatitis, or damage to the sympathetic. Brown-Séquard in a further paper repeated his conclusions and denied that the results of removal were due to concomitant lesions. The negative results obtained by ablation might have been due to a compensatory activity of accessory supra-renal bodies, which Stilling had shown underwent hypertrophy after removal of the main glands. Tizzoni's observations were next described at length. Removal of one or of both supra-renal bodies gave rise to death with inflammatory changes in the central nervous system. Death might be postponed for years or might occur shortly after the operation. Since the same result followed the removal of one or of both organs, Tizzoni considered that the effects were not due to a toxin, but to disturbance of the circulation in the nervous system set up by irritation of the sympathetic connected with removal of the supra-renal body. These changes were not constant and so far had not been confirmed. Stilling thought the changes were set up by extension of inflammation from the wound. Tizzoni regarded the supra-renal bodies as only of importance from their close relation to the sympathetic. McMunn believed that the supra-renal bodies picked out effete blood pigment and its accompanying proteids from the blood, and that when these organs were destroyed or removed, pigment and poisonous bodies accumulated in the blood. Neurine had been thought to be the poisonous body which, when not removed, accumulated and gave rise to the symptoms of Addison's disease; this did not appear to be the case. There was no proof that leucin, lecithin, taurocholic acid, &c. were removed by the supra-renal bodies, or that accumulation of them gave rise to symptoms analogous to those of Addison's disease. Removal of the supra-renal bodies had been shown (Langlois and Abelous) to produce a fatal toxæmia, which could be prevented by the injection of supra-renal extract. Injection of the blood of decapsulated animals into healthy ones gave rise to symptoms like those following removal. The toxic body or bodies had an effect analogous to that of curare; they were probably due to muscular metabolism and had a resemblance to the poisonous bodies found in the blood of tetanised animals. Animals from whom the supra-renal bodies had been removed showed rapid and persistent fatigue which had been compared to the asthenia of Addison's disease. These writers regarded the supra-renal capsules as active glands, producing an internal secretion, which antagonised toxic substances formed in the metabolism of the body. Ligature of the pedicle, including the vein, of the supra-renal bodies had been shown to be more fatal than ablation (Boinet). Ligature abolished the functional activity of the glands and gave rise to less damage to the adjacent sympathetic. If one supra-renal body was removed the other had been noticed to hypertrophy; if the remaining one was separated from its nervous connexions and left *in situ* no bad results followed; if, however, the hypertrophied organ was removed death resulted (Thiroloix). Therefore, removal gave rise to symptoms from interference with the functions of the glands, not from concomitant isolation of the sympathetic. Schäfer and G. Oliver[2] had injected supra-renal extract into animals. They had found: 1. A rise of blood pressure due to arterial constriction, best seen after section of the vagi, by which means the concomitant inhibition of the heart was prevented. The constriction was due to peripheral action, since it persisted after section of the spinal cord and nerves. This high blood pressure was not affected by stimulation of the depressor. The rise in blood pressure was transient. 2. Cardiac inhibition due to vagus stimulation; stimulation of the cardiac muscle, leading after section of the vagi to acceleration and augmentation. 3. Paresis of voluntary muscles due to modification of muscular contraction akin to that produced by veratria, but not in any way analogous to the action of curare. Since this effect lasted longer than the cardio-vascular phenomena, the extract probably became stored up for some time in the muscles. 4. That the active principle of the extract is only present in the medulla, and not at all in the cortex. B. Moore[3] had found that the active principle was not a proteid or a carbohydrate, that it was not affected by acids or by boiling for some minutes, but that it was destroyed by alkalies and by continued boiling. It dialysed and had a powerful reducing action. Its properties resembled those of a reducing agent described by Vulpian in 1856 as special to the medulla of the supra-renal bodies. The active principle had not been isolated.

Three deductions were possible from these researches: (1) that the supra-renal bodies had no proper function and were only important from their close relation to the sympathetic; (2) that these organs were *excretory* glands, removing pigment and toxins from the circulation; (3) that they were *secretory* glands, providing an internal secretion which was of use in the economy. The evidence was sufficiently strong to show that the supra-renal bodies had some definite function. The lecturer said it was more convenient to postpone the discussion whether the function was excretory or secretory until the explanation of Addison's disease was dealt with, since the physiology and pathology of these bodies were so inextricably blended.

MORBID ANATOMY OF ADDISON'S DISEASE.

Addison originally described eleven cases, of which six were tuberculous, one of cirrhotic atrophy, in three cases malignant growths occupied the supra-renal bodies, and in one a nodule of carcinoma blocked up the supra-renal vein. Addison's views were quoted. The view of the unity of Addison's disease (Wilks) was that all genuine cases of Addison's disease were due to one and the same lesion of the supra-renal bodies: a chronic inflammation comparable to hepatic cirrhosis. Though Addison's disease was most commonly due to tuberculous disease of the adrenal bodies, well-authenticated cases due to simple and cirrhotic atrophy had been recorded. The association of Addison's disease and malignant growths in the supra-renal capsules was then referred to. The sympathetic in the neighbourhood of the adrenals was sometimes sclerosed, sometimes normal. Von Kahlden had described certain changes in the semilunar ganglia as of great importance in the causation of Addison's disease; these, however, resembled those normally found in adults by Hale White. Cases had been recorded where the supra-renal bodies themselves were healthy, but where the sympathetic was involved in a mass of growth. The distribution of cutaneous pigment in Addison's disease was described as an exaggeration of that normally met with. The pigment melanin was present in the stratum Malpighii of the epidermis and in "carrier cells" in the dermis. The carrier cells probably conveyed pigment from the blood-vessels to the epidermis; in Addison's disease this transference was exaggerated owing to functional changes in the vessels. Professor Delépine had suggested that melanin was

[2] Proc. Phys. Soc., March, 1894-95.
[3] Ibid.

normally the antecedent, not the derivative, of hæmoglobin. Averbeck and Burger's view that the pigmentation of Addison's disease was due to very active metabolism of the cells of the stratum mucosum was mentioned. Pigmentation of mucous membranes was rarer, and was usually regarded as a more reliable sign of Addison's disease than cutaneous bronzing. Dixon Mann described the pigment as situated in the dermis, and not in the epithelial cells of mucous membrane, and pointed out that its occurrence depended on irritation. Pigmentation of serous membranes was probably due to past inflammation; its presence had been recorded almost exclusively in the peritoneum.

OTHER ANATOMICAL LESIONS MET WITH IN ADDISON'S DISEASE.

The lymphoid follicles of the stomach and intestine were often enlarged; the spleen was not infrequently enlarged and softened, and the thymus gland had been found to be persistent. This evidence of activity in lymphoid tissue was compatible with the view that in Addison's disease toxic bodies were present in the blood, since in animals leucocytosis followed the injection of bacterial poisons, and leucocytosis presumably meant increased activity of the lymphoid tissue of the body. Tizzoni had quoted two cases of Addison's disease in which lesions of the central nervous system, somewhat like those which he had obtained experimentally, had been described.

Three Lectures
ON
TRAUMATIC INFECTION.

Delivered at the Royal College of Surgeons of England on Feb. 25th and 27th, and March 1st, 1895,

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LECTURE III.

Delivered March 1st.

VARIOUS INFECTIVE CONDITIONS.

Streptococcus Pyæmia: Bacterial Emboli in Organs apparently Normal.—Streptococcæmia.—Urine in Streptococcæmia.—Mixed Infections.—Angina Ludovici with Bacillary Septicæmia.—Conveyance of Infection by Contiguity; Septic Pneumonia.—The Local Infection in Angina Ludovici.—Consecutive Infection: The Pathology of Hectic Fever.

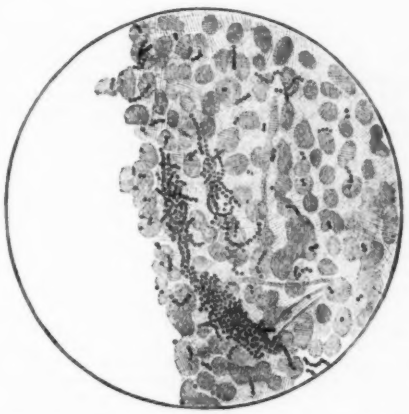
GENTLEMEN,—In this third lecture I propose to describe cases of traumatic infection which do not clearly fall under the preceding headings. But first I will describe a case of pyæmia which presented some instructive features, especially that the naked-eye appearances of infected organs cannot in the least be trusted to indicate the absence of infection.

STREPTOCOCCUS PYÆMIA: BACTERIAL EMBOLI IN ORGANS APPARENTLY NORMAL.

Pyæmia is one of the best examples of septicæmia with subsequent sarcosepsis. I only propose to mention one example of pyæmia which was of the streptococcus variety, because it shows how easily the infective diseases may be overlooked if reliance be given to naked-eye evidence, and that bacterial emboli may be found in organs otherwise normal.

CASE 14 (Figs. 20 and 21).—An infant a year and ten months old was burned upon the arm. The burn was of the second and third degree, and not extensive. It suppurated, and the infant became ill, with a temperature of 102° F. An abscess formed in the subcutaneous tissue of the chest and a rash overspread the body. After the appearance of this rash the infant was isolated, scarlet fever being suspected. Death ensued without any complications such as nephritis, meningitis, or pneumonia. At the examination the burn, which involved about half the arm, looked quite healthy. The parotid region was swollen, but did not contain pus. The lymphatic glands beneath the angle of the jaw were filled with softening caseous material. There was a subcutaneous abscess as big as the palm of the hand upon the side of the chest, and filled with thick pus. All the abdominal and thoracic viscera were individually examined and pronounced to be normal, as were also the serous and mucous coats of the intestines. The examination was made by my colleague, Mr. James Berry, whose name is a guarantee for the thoroughness and correctness of it. He concludes his report by saying that "the death was apparently due to the suppuration of the neck and

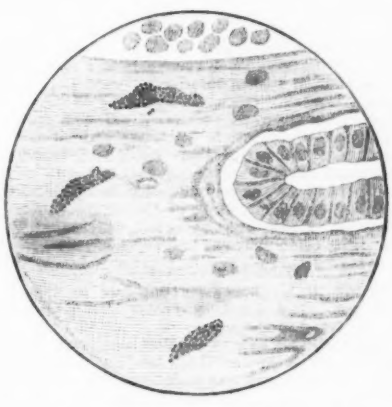
FIG. 20.



Streptococcus pyæmia. Streptococci in the walls of a subcutaneous abscess. (The lecturer is indebted to Messrs. Cassell and Co. for this figure, which is from his forthcoming article on Pyæmia in "A System of Surgery," edited by Mr. Treves, and now in the press.)

chest; perhaps to some meningeal trouble, as the head was not allowed to be examined." I cannot tell whether this surmise is correct, but the histological examination of some parts of the body gave the following results. The abscess wall was composed of fibrino-purulent material mixed with incredible quantities of streptococci in chains, both long and short, especially the last. (Fig. 20.) To the naked eye the kidneys and liver looked, as Mr. Berry said, quite normal,

FIG. 21.



Streptococcus pyæmia. Micrococci in the capillaries of a portal canal. In this case the liver and other organs were considered normal to the eye.

but the parenchyma of each was beginning to exhibit the early stages of cloudy swelling. Also in the liver a great many of the small vessels and capillaries of the portal canals, and also the vasa vasorum of the portal veins and of the bile-ducts, were plugged with micrococci. (Fig. 21.) These cocci were so crowded together that chains could not be recognised, but this is not

uncommon in streptococcus poisoning. Some blood which had remained in the hepatic veins contained occasional diplococci and short chains of cocci. In the cortex of the kidneys similar plugs of micrococci were found in the capillaries of the glomeruli and tubules, and especially in the vasa vasorum of the renal vessels; but these emboli were much harder to find in the kidneys than in the liver, being less numerous. As regards the cocci in the liver, it seems very evident that they had been carried there by the hepatic artery. It is probable that after a while they would have emigrated from the capillaries into the bile-ducts; indeed, the process seemed in places to have begun. Here we have an explanation of the presence of bacteria in bile without a macroscopic focus, such as an abscess, having been discovered. Hitherto bacteria found under such circumstances have been supposed to have been excreted with the bile. Had these plugs gone on to the formation of abscesses it is clear that the result would be very different from that produced by infection carried along the portal veins, but I am not aware that such differences have been described. It is interesting to note that although the kidneys contained capillaries plugged with micrococci yet albuminuria had not occurred, although it was frequently sought for. Lastly, the presence of the cocci in the vasa vasorum seems to me a fact of some moment. They had not begun to produce changes in the vessel walls, and it would be most interesting to speculate as to the ultimate result had the child survived. This case belongs to a class the seriousness of which is not always properly appreciated. Infants are most susceptible to both local and general infection, but the latter is often overlooked. I have no doubt whatever but that more searching and systematic examination of the tissues by more exact methods will vastly increase the *rôle* played by septicæmia in surgery.[1] The mortality after burns is a reproach to surgery. It could often be avoided by the skilful use of antiseptics.

CASE 15.—To control the investigation of this case of streptococcus pyæmia, that of a child who died with an extensive burn of the chest and abdomen may be mentioned. When the histological investigation of the lungs, liver, spleen, and kidneys was made by Dr. Blackwell and myself we were ignorant of the clinical details or of the result of the post-mortem examination, which was performed by Mr. Berry twenty-eight hours after death. We could find no bacteria in any of the tissues or organs, and came to the conclusion that death had been due to acute bronchitis. We afterwards learnt that this was correct, and that the burns were supposed to have been caused by the application of poultices intended for the relief of the bronchitis.

The foregoing case of streptococcus pyæmia might have been mistaken for one of scarlet fever in which streptococcus poisoning had occurred had it not been for the abscess upon the chest wall. Cornil and Babes[2] give a figure of the kidney after scarlet fever with a streptococcus embolus in one of the capillaries. Their specimen was apparently the same as that which I have described, except that there was also amyloid disease. The same authors give other figures of streptococci in the renal vessels in scarlet fever.[3] They seem a common complication. Cultures showed that they were the streptococcus pyogenes. Leber and Wagenmann have described a case of streptococcus poisoning in an infant, but seem to have given their attention to the local lesions and not to have examined some of the organs because they looked normal. However, streptococci were found by them in the skin, eye, orbit, kidneys, and supra-renals.

STREPTOCOCCÆMIA.

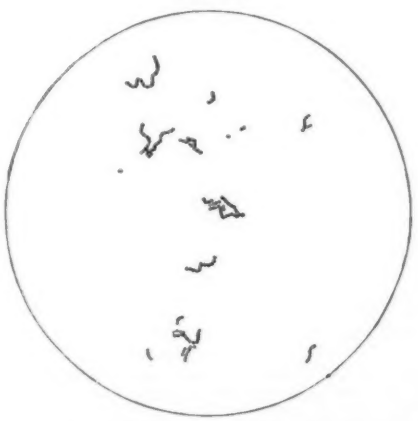
Streptococcæmia is, I believe, not rare in infants and young children. As a rule, they recover from it after having sustained severe damage to one or other of their organs. Lately I had under my care in St. Bartholomew's Hospital a case exceedingly like the one which has just been narrated.

CASE 16.—The patient was a delicate female child aged two and a half years. She was admitted with an ulcer about an inch long and half an inch wide at the left margin of the anus. It involved the cutaneous and a little of the mucous surface. At first it spread, but afterwards healed with simple local remedies. When admitted the child also had a loud systolic murmur, which still exists. Her liver, too, was enlarged almost to the umbilicus. Her legs were œdematous, with albumen in the urine. The temperature was usually subnormal, the thermometer as a rule registering 98° F. The coexistence of a point of inoculation, an endocardial bruit, acute nephritis, and swollen liver seemed to me to point so clearly to bacterial invasion that Mr. Furnivall, at my request, examined the blood and the urine. Nothing could be seen in the blood, nor could anything be grown from it upon the usual media. Fresh specimens of the urine collected with proper precautions contained cocci in short chains. I attached no importance to the absence of temperature in this case. As a sign of bacterial invasion the temperature is unreliable. It is quite usual to see no elevation of temperature even in such profound invasions as diffuse septic peritonitis. It is unreasonable to think that all bacterial poisons must be pyrogenous. The temperature, however, rose to 103° during the seventh week of her stay in hospital. A skin eruption, which was supposed to be measles, appeared at the same time. At this stage no streptococci could be found in the urine. The cause of the ulcer was never found out. Although a year has passed it has not been followed by any signs of syphilis. This is interesting because the mother had a syphilitic ulcer upon her face, but in the gummous stage, and not, therefore, capable of infecting another with syphilis. That the ulcer of the mother was infected with other bacteria is certain. In a similar case I found staphylococci, streptococci, and bacilli.

Streptococci are easy to see in fluids, and appear in the urine soon after infection. The following is a common example of this.

CASE 17 (Fig. 22).—A healthy youth aged fifteen years crushed his hand and arm in a printing machine on Nov. 12th, 1892. Amputation was performed through the arm, and on the 13th his temperature was 101° F.; on the 14th it was 102°, and the urine contained a cloud of albumen. On the 24th he had pronounced pyæmia, with pus containing streptococci in the right hip, knee, and ankle. At the same time his urine contained numerous streptococci. (Fig. 22.) No examination

FIG. 22.



Streptococcus pyæmia. Streptococci in pyæmic urine. From a micrephotograph by Mr. Cosens. (I am indebted to Messrs. Cassell and Co. for this figure. It is from a forthcoming article on Pyæmia by the lecturer in "A System of Surgery," edited by Mr. Treves, and now in the press.)

was permitted in this case, but in another of acute suppurative periostitis of the tibia following an injury the urine contained a similar cloud of albumen, and after death the kidneys were found acutely inflamed and studded with small abscesses and infarcts. The pus of the abscesses contained staphylococci similar to some found in the pus from the necrosed tibia.

I do not propose to discuss the conditions under which bacteria escape by the kidneys. This interesting question has been ably treated by Dr. Sherrington in his recent article and by others. Dr. Sherrington's work[5] leads him to the conclusion

[1] Dr. A. S. Blackwell and myself were quite unable to demonstrate the conditions in the liver and kidneys by Gram's method. We succeeded by long immersion in the eosin and methyl blue solutions, from four to six days being requisite. I am much indebted to Dr. Blackwell for his trouble.

[2] Les Bactéries, vol. ii., p. 289, Fig. 303.

[3] Figs. 305 and 306.

[4] Infantile Necrose der Bindehaut mit letalem Ausgang durch allgemeine multiple Streptokokken; Invasion des Gefässsystems. Archiv für Ophthalmologie, 1888, vol. xxxiv., p. 250.

[5] The Escape of Bacteria with the Secretions. Journal of Pathology, vol. i., p. 276. This valuable paper gives a full bibliography.

that "the evidence is against believing that when this transit of bacteria across the secreting membrane occurs the membrane is still normal in condition, although at the same time it need not be ruptured or pervious to red corpuscles." In the main Dr. Sherrington's observations confirm those of Klebs, Orston, Fodor, Wyssokowitsch, and many others.

CASE 18.—I thought at one time that I had obtained clinical evidence that the healthy kidneys excrete bacteria. I performed laparotomy for a pistol-bullet wound of the stomach. The wound was inaccessible, and other injuries combined to cause a fatal ending. After the operation a drain was placed in the peritoneal sac. Some blood-stained fluid drawn from this tube ten hours after the operation and sixty-four hours after the injury was full of cocci, streptococci, and short bacilli. Urine collected at the same time contained similar morphological varieties. The kidneys were histologically normal, with the exception of a slight interstitial nephritis which, I afterwards learnt, was of old standing. This case illustrates the difficulty of obtaining clinical evidence of the elimination of bacteria by healthy kidneys. Also, assuming the correctness of my observations, it shows that it may be wrong to consider, as I have done, that diffuse septic peritonitis is a purely local infection.

MIXED INFECTIONS.

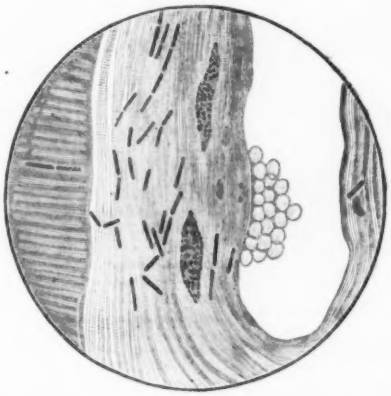
I propose now to proceed with some complicated conditions of infection. In some of these the local disease was associated with a variety of bacteria, of which it seems possible that at least two species had invaded the body. In others it is probable that the original local disease was a pure infection which was supplanted by another of a severer type capable too of invading the body.

ANGINA LUDOVICI WITH BACILLARY SEPTICÆMIA.

CASE 19 (Figs. 23 and 24)[6].—In this case a bacillary septicæmia, closely resembling the cases I described in Lecture II. (Case 9),[7] was unexpectedly met with in that grave disease described by Ludwig and called after him "cynanche or angina Ludovici." In narrating this case I propose, after giving the clinical history and morbid anatomy, to describe the septicæmia, and then discuss the cellulitis of the neck and its other complications. It will then be seen that the angina Ludovici is probably a mixed infection of the most complicated kind. Indeed, the examination of this and other cases leads me to think that several pathological conditions are included in the term "angina Ludovici." The case is also an example of the difficulty of the problems which confront inquirers into the infective processes of man. The patient was a man aged twenty-eight years. He was a heavy drinker. The cellulitis of the neck began without apparent cause and spread rapidly. On the fifth day the usual incisions were made and a little pus escaped. The patient became violent and was thought to be suffering from delirium tremens. On the sixth day œdema of the glottis caused so much dyspnœa that tracheotomy was performed. He became apathetic, drowsy, and unconscious, and died early on the eighth day. The actual cause of death was supposed to have been pneumonia. His highest temperature was 103° F., recorded on the seventh day. His urine contained a trace of albumen. Throughout his illness a purulent discharge ran from the floor of the mouth, and there was the usual horrible fetor. The drowsiness, apathy, and unconsciousness which supervened in this case remind me very strongly of the clinical condition of the woman who died from septicæmia after amputation of the breast for ulcerated scirrhus (*vide* Case 9, Fig. 10),[8] and soon it will be shown that the same kind of bacillary infection existed in both cases. The delirium also may have been due to the septicæmia, and not, as was supposed, to alcohol. After death I found amongst the swollen and septic tissues of the neck engorged lymphatic glands and a clot in the left internal jugular vein. Both lungs were pneumonic and the kidneys swollen and engorged. The floor of the mouth was sloughing and ulcerated, and infiltrated with fetid pus. The heart and great vessels were normal, but gas escaped as I divided the pulmonary veins. The peritoneal cavity also contained some gas and blood-stained fluid. The spleen was enlarged and friable. The histological evidence of the septicæmia was in the kidneys. These organs were, as I have said, engorged with blood, some of which had remained in the veins and capillaries, forming a natural injection. Here and there this blood contained a large bacillus which will be described presently. But in addition the vasa vasorum of some of the larger vessels of the medulla were packed with bacteria (*vide* Fig. 23), which I judged to be small, short bacilli. The appearances of these were the same as those of the cases of septicæmia which have been already described, and closely resembled the appearances seen in septicæmia artificially induced in animals. Similar bacterial emboli were not found in the capillaries of the lungs, liver, spleen, or neck. The heart and other organs were not examined.

I cannot ascertain that others have alluded to the presence of bacteria in the vasa vasorum. If a frequent occurrence, it would be of importance and may have a relation to ulcerative arteritis. What part the septicæmia played in causing the patient's death cannot be told, because the case was complicated by other bacteria, the presence of which cannot be ignored. In the walls of the renal vessels and in the intertubular tissues there were vast numbers of large bacilli, which in size, shape, and appearance exactly resembled Baumgarten's[9] representation of the bacillus septicus, or Fraenkel and Pfeiffer's microphotographs.[10] They grew separately or in long strings (Fig. 23); their ends were slightly rounded, with a width of one millimetre and a variable length, but always

FIG. 23.



Angina Ludovici. Kidney with large bacilli in the walls of the vessels near the hilum; also with small bacteria in the capillaries.

many times the width; they contained no spores, but multiplied by fission; they evidently shunned the blood stream and grew in the interstices of the tissues running parallel to the muscle cells or connective tissue bundles. A similar absence of bacilli from the blood is observed when animals are killed with the bacillus septicus, and is accounted for by its strictly anaerobic properties. But as decomposition ensues they appear, as Flügge says, in the decomposing and oxygen-free blood.[11] In this way their occasional presence in the blood in this case would be explained. The secreting substance of the kidney had not suffered in any considerable degree, but the interlobular connective tissue was swollen, with here and there small inflammatory exudations, amidst the cells of which were occasional cocci, diplococci, and streptococci.

Before discussing the meaning of these large bacilli I propose to describe their presence in other organs. The lungs had the usual histological characters of acute septic broncho-pneumonia. (Fig. 24.) Their vessels were engorged with blood, forming a natural injection. This blood contained a few large bacilli, the same as those in the tissues of the kidneys. But the walls of the smaller pulmonary veins, like the renal veins, contained considerable numbers. The solidified pneumonic tissues were packed with vast numbers, and they were particularly abundant beneath the pleura and

[6] I am indebted to Dr. C. Addison for much hard work at this case.
[7] THE LANCET, March 9th, 1895. [8] Ibid.
[9] Loc. cit., p. 469, Fig. 49.
[10] Mikrophotographischer Atlas der Bakterienkunde, Pt. 5, Figs. 45 to 49.
[11] Flügge: Micro-organisms with Special Reference to the Etiology of the Infective Diseases, p. 246. Translated by W. Watson-Cheyne. New Sydenham Society, 1890.

in non-vascular areas. They were clearly the predominant feature in the lung disease. In the lungs the bacilli grew in leptothrix less often than in the kidneys. The pneumonic tissues also contained occasional encapsuled diplococci the same as those described by Fraenkel and others.[12] Their presence was unexpected and gives rise to speculation as to their meaning in this and other cases. As Netter, Biondi, Vignal, Fraenkel, and others have shown, encapsuled cocci are found in saliva,[13] and may thus, it may be supposed, pass into the air passages and lungs. The purulent tissues of the floor of the mouth were packed with cocci, diplococci, streptococci, and bacilli of various kinds. Amongst the cocci the presence of staphylococcus aureus and streptococcus pyogenes was proved by cultures. The bacilli included the ordinary ones of putrefaction, and in addition the sections of the deeper œdematous muscles and cellular tissues of the floor of the mouth and of the neck contained many large non-spore-bearing bacilli, the same as those in the kidneys and lungs. These bacilli were most difficult to demonstrate; but Dr. Addison and myself succeeded by soaking the sections for many days in Czenzynke's solution. Thus this case lends support to Baumgarten's[14]

FIG. 24.

Angina Ludovici. Septic pneumonia in angina Ludovici.

statement that acute phlegmon of the submaxillary cellular tissue was an invasion of streptococcus or of staphylococcus pyogenes, sometimes of both together, and to Eisenberg's observation that he found streptococci in the saliva in a case of phlegmonous angina. As Widal and Besançon have recently shown, streptococci are present in the mouth in both health and disease. I do not think, however, that the large bacilli in the floor of the mouth, neck, lungs, and kidneys can be ignored. I was prompted to look for bacilli because some kinds of angina Ludovici have such a close resemblance to acute spreading traumatic gangrene or malignant œdema, a disease which is acknowledged to be of bacillary origin, being caused by the bacillus septicus.

It may not be out of place for me to remark that the bacillus septicus is of the greatest interest to surgeons, and may, as I have already said, occur oftener than is thought. It was discovered by Pasteur and investigated by Koch, and is also called the "bacillus œdematis maligni." The disease which it causes is also called "gaseous or acute spreading traumatic gangrene." The bacillus septicus is an inhabitant of earth, mud, and decomposing substances of all kinds; hence it may be found in the human body without it having caused the fatal disease. In size and appearance the bacillus septicus closely resembles the bacillus of anthrax. Its ends, however, are slightly round, and its spores, which are not formed whilst the bacillus is in the tissues, are large enough to bulge the bacillus; it is also mobile and is a strict anaerobe; it usually produces a quantity of fetid gas. The clinical effects of the bacillus septicus might almost be inferred from its behaviour in the laboratory. The rapidity of its growth and motion is exemplified by the swift spread of the disease, its abhorrence of oxygen by its passage along the lymph paths, its gas-producing powers by the emphysematous crackling, and, lastly, the noxiousness of its ptomaines by the poisoned condition of the patient. But although the production of a fetid gas is one of the properties of the bacillus septicus, yet Sternberg[15] says that pure cultures often cause inflammatory œdema without emphysema. Very little seems to be known about the behaviour of the bacillus in the human organs. Obviously any gas which it produced in the lungs would escape and leave no trace, and probably the same applies to the kidneys. But in the case which I have just described the escape of gas from the pulmonary veins and its presence in the peritoneal sac are to be noted as evidence of the presence after death of a gas-producing bacillus. Presently I will describe another case of angina Ludovici in which the emphysematous crackling of the skin and subcutaneous tissues was observed during life, and in which there was also a bacillus in the lymph paths and in the inflammatory exudation. (*Vide* Fig. 26) It has lately been claimed that other bacteria besides the bacillus septicus cause acute inflammatory œdema and emphysema of the cellular tissues. Eugen Fraenkel[16] has described such an one and called it "bacillus phlegmones emphysematosæ." It closely resembles the bacillus septicus in all its characters, but is motionless. It was found in four cases of "gas phlegmon." Bunge,[17] in a case of emphysematous cellulitis (gas phlegmon), found the bacillus coli communis and staphylococci, streptococci and proteus together. Rosenbach also observed the coincidence of pyogenic cocci and bacillus septicus.[18] Gärtner[19] has recently described a gas-producing bacillus, which Klein[20] considers identical with the bacillus coli communis. I shall soon describe a case of angina Ludovici in which there was emphysema, and in which a bacillus was seen in the skin and cellular tissues. This bacillus had not quite the morphological characters of the bacillus septicus. We must also take into consideration a bacillus which Dr. Klein[21] met with in the tissues of guinea-pigs inoculated with garden earth. It grew in rods of different lengths and was mobile. Moreover, it was an aerobe and did not liquefy gelatine. In many points Dr. Klein's account of his bacillus reminds one of the colon bacillus, which is of course a common inhabitant of earth which has been manured. The possibility of these being cadaveric bacilli which had emigrated from the intestines has also to be considered. Although I have examined a great many diseases by the same methods similar bacilli have not been met with, except in the case of axillary wound with pleuritis (Fig. 7), and in a case to be described forthwith. Moreover, in the case of which I am speaking the bacilli were always most abundant where there was most disease. In a case of pneumonia due to the laceration of the lung by broken ribs the ordinary picture of a fibrinous pneumonia was unaccompanied with bacilli such as were found in angina of Ludwig and the case of fracture of the jaw which I am about to describe. Indeed, in the traumatic pleuro-pneumonia I could not with confidence assert the presence of any bacteria, although it is probable that a few scattered encapsuled cocci were present. All kinds of methods were used to stain the sections. Great labour was expended in examining the lungs of a patient who died from pneumonia after excision of the tongue. The pneumonic exudation was fibrinous and contained encapsuled bacteria, often in pairs, but no big bacilli. If these bacilli in the kidneys and lungs of this case of angina of Ludwig had been cadaveric it means, of course, that they had grown after death. Therefore I should have expected to have found them elsewhere than in the diseased tissues and organs. But none were found in the spleen or liver, although those are organs which are especially exposed to infection from the bowels. But throughout these investigations I have greatly felt the want of more definite knowledge of the cadaveric bacteria, especially their morphological

[12] With $\frac{1}{12}$ in. oil immersion (Zeiss) and No. 8 eye-piece these bacteria looked elongated and perhaps lancet-shaped.

[13] E. Macé: Traité Pratique de Bactériologie, second edition, p. 230, et seq. Paris, 1891.

[14] Lehrbuch der Pathologischen Mykologie, p. 883. Braunschweig, 1890.

[15] A Manual of Bacteriology, p. 491.

[16] Centralblatt für Bakteriologie und Parasitenkunde, 1893, vol. xiv., p. 622. (Abstract.)

[17] Zur Aetiologie der Gasphlegmone. Münchener Medicinische Wochenschrift, 1894, No. 46, p. 918. Also Centralblatt für Bakteriologie, 1894, vol. xvi., p. 831.

[18] Micro-organisms in Human Traumatic Diseases. Translations of the New Sydenham Society, 1886, p. 430.

[19] Centralblatt für Bakteriologie, vol. xv., 1894, p. 1.

[20] Loc. cit., p. 276.

[21] Ein neuer Bacillus des malignen Oedems. Centralblatt für Bakteriologie und Parasitenkunde, vol. x., 1891, p. 186.

varieties and staining properties. Sternberg[22] gives a brief reference to the subject and a photograph of cadaveric bacilli. No resemblance can be traced betwixt these and the bacillus found in the tissues of this case of angina. Jensen and Sand[23] also say that many large bacilli are found in animals which have died from asphyxia and lain for twelve or twenty-four hours. They differ from the bacillus septicus, however, in form, microchemical peculiarities, and inoculation effects. It would be no detraction from the importance of these bacilli to acknowledge that they were saprophytes causing putrid decomposition. That, most probably, is their function. But everyone knows that putrid decomposition of the tissues and fluids of the body occurs during life in angina Ludovici, and is part of the disease. Even if we assumed that these large bacilli were the chief cause of death, yet the bacteria which swarmed in the floor of the mouth may have played an important *rôle*. For the life of strict anærobes like the bacillus septicus and its congeners oxygen must be either absent or abstracted. Now, many of the saprophytic and pyogenic bacteria, such as those in the foul tissues of the floor of the mouth, consume oxygen with avidity, and prepare and maintain an environment in which the anærobes can live and flourish. Nothing was found at the necropsy or before to show whence these various bacteria came. It is to be doubted whether normal saliva could produce such effects, although it is well known that it often contains pathogenic bacteria. The important part which the saliva plays in rabies has led to many investigations of its properties by Pasteur and others. Injected into rabbits it causes a rapidly fatal septicæmia, with encapsuled cocci in the blood of various organs;[24] but I cannot ascertain that the bacillus septicus has ever been met with in sputum septicæmia. Biondi[25] injected the saliva of diseased and healthy individuals into the tissues of bloodvessels of rabbits, guinea-pigs, and dogs. From these were isolated bacillus salivarius septicus, coccus salivarius septicus, micrococcus tetragonus, streptococcus septopyæmicus, and staphylococcus salivarius pyogenes, but nothing comparable to the bacillus which abounded in this case of angina Ludovici; but the bacillus septicus is so widespread that there is no difficulty in understanding that it might easily have been introduced with some article of diet.

The foregoing suggests that in future cases of angina Ludovici a determined attempt should be made to disinfect the floor of the mouth and tissues of the neck before septicæmia or general tissue infection has supervened. Solutions of peroxide of hydrogen would probably be the safest disinfectant.

CONVEYANCE OF INFECTION BY CONTIGUITY; SEPTIC PNEUMONIA.

CASE 20 (Fig. 25).—A bacillus morphologically the same as that met with in the tissues of angina Ludovici was seen in the walls of a putrid abscess of the lung, which was found under the following circumstances. A young man who had been intemperate for two years was admitted into St. Bartholomew's Hospital after a brawl suffering from wounds about the head and face, a compound fracture of the lower jaw, and concussion of the brain. The day after admission his urine contained a cloud of albumen. He was very restless and had a temperature of 102° F. He was unconscious, but shouted at intervals. His right arm seemed rather weaker than the left, but this went away, and he became conscious and seemed to be progressing towards recovery. The eleventh day after the injury his temperature rose gradually to 101·8° F., and he again became unconscious with fresh symptoms of hemiplegia. During the ensuing week there was no abatement of these symptoms, and as his temperature still ranged between 100° and 102° he was supposed to have pyæmia, and a cerebral abscess was suspected. His brain was exposed after the skull had been trephined, but nothing was found. Death ensued the day after the operation, and twenty-four days after his injury. At the necropsy the brain was normal. There was suppuration around the fractured jaw with about two drachms of fetid pus. The internal organs were congested, but otherwise normal, except the right lung, which was pneumonic, with a putrid abscess in the upper lobe. It was surmised that this abscess was pyæmic. The histological examination did not bear out the supposition that pyæmia had anything to do with his death. The liver and kidneys had suffered from his intemperance. In the liver there was an excess of fibrous tissue and in the kidneys commencing interstitial nephritis. The only change which might have indicated sepsis was slight cloudy swelling of the renal epithelium. No bacteria could be found in either the liver, kidneys, or spleen. The lungs, however, afforded abundant evidences of bacterial invasion. They were engorged with blood which had extravasated into some of the air cells, but the latter were mainly filled with pneumonic exudation. In some parts this exudation contained swarms of a small, short, round-ended bacilli (Fig. 25) similar to the proteus vulgaris of Hauser; but the most striking objects were very large bacilli scattered in numbers both in the tissues of the lung and in the pneumonic exudations. These bacilli had slightly rounded ends and were 1 μ thick and from 3 to 6 μ long. They contained no spores and multiplied by fission, being often seen in twos or in short chains. The bacilli were abundant where there was most connective tissue, as, for instance, in the adventitia of the pulmonary vessels, thus suggesting that they were anaerobes. The walls of the obliterated air cells contained many of them, also the exudation; but the blood in the vessels contained none or occasional isolated examples. The lungs contained no bacterial emboli, nor could bacteria be seen in the clots in the vessels. By an unfortunate omission I obtained none of the brain for examination. It may be remembered that the clinical symptoms were like those of cerebral compression, although none existed. None of the bacteria in this lung possessed capsules, but the specimens had been hardened in alcohol. They bore no likeness to Friedländer's pneumo-bacillus, although in animals it seems as if that organism might grow to some size and length.[26]

FIG. 25.

Septic pneumonia following a compound fracture of the lower jaw.

THE LOCAL INFECTION IN ANGINA LUDOVICI.

CASE 21 (Fig. 26).—The local tissue changes and some of the characters of the infective process in angina Ludovici were seen in a case which Dr. E. Valentine Gibson[27] described. I am indebted to him and Dr. Cameron for some of the inflamed cellular tissue of the neck. Unfortunately, specimens of the other organs could not be obtained. The case was that of a man aged forty-nine years, who had been a heavy drinker, was attacked with cellulitis of the neck, and died comatose in less than fifty-two hours. Twenty-four hours before he died a sudden dyspnœa nearly ended his life, but he was saved by tracheotomy and incisions, and afterwards there was no obstruction to the entrance of air. Nevertheless, his dyspnœa increased and he became

[22] Bacteriology, p. 583 et seq.; Fig. 197.

[23] Ueber malignes Oedem beim Pferde. Deutsche Zeitschrift für Thier-Medicin, Band xiii., 1887, Heft 1. Quoted in Centralblatt für Bakteriologie, vol. i., p. 265 et seq.

[24] Macé: Traité Pratique de Bactériologie, p. 280 et seq. Paris, 1891.

[25] Die pathogenen Micro-organismen des Speichels. Zeitschrift für Hygiene, 1887, vol. ii., p. 194.

[26] See Günther's Bakteriologie, Plate xii., Fig. 67.

[27] A Rapidly Fatal Case of Angina Ludovici. THE LANCET, June 3rd, 1893.

cyanosed before he died. The cellulitis spread from the neck to the chest and, as it afterwards appeared, to the mediastinal cellular tissue. The swollen tissues were full of gas and began to crepitate. The temperature was in no way remarkable and was usually about 98° F., but rose to 101° the evening before he died. The urine contained no albumen. At the examination, which was made four hours after death, an ulcer was found upon the side of the neck, and it is probable that this is the point of inoculation. The inflamed cellular tissue was full of fluid, had a gelatinous appearance, and minute bubbles of gas made it glisten. The mediastinal cellular tissues were also inflamed, but the thoracic and abdominal viscera had nothing noteworthy the matter with them, nor was there any disease of the salivary glands. No bacteria were found in the fluids squeezed from the tissues, and Dr. Cameron reported that he could find "no specific pathogenic micro-organisms in the tissues." By using Czenzynke's method and by staining the sections for many days we found the cellular interspaces and lymph paths crammed with cocci, diplococci, and streptococci in long and short chains. (Fig. 28.) In some places the micro,

FIG. 26.

Angina Ludovici. Streptococci and bacilli in the cellular tissues.

cocci lay in dense masses. The tissues were œdematous and their connective tissue bundles swollen. In some places nests of pus cells had collected, and amongst them were numbers of bacilli. Some of these were about the size of the bacillus anthracis, but with rounded ends. They contained no spores, and were straight or slightly curved. Others were of the same thickness, but shorter. These probably belonged to the same species as the long ones. Finally, the pus had small bacteria in it, of which some were undoubtedly micrococci, but others looked like very small oval bacilli, such as were found in the capillaries of the last case of angina Ludovici.

The discovery of streptococci in this case is quite in accordance with that which others have observed. They probably belonged to one of the species of streptococcus pyogenes. The presence of the large, round-ended bacilli is of great interest when we recall the fact that during life and after death gas was found in the tissues. This might suggest that the bacillus septicus was present. This would not only explain the emphysema, but also the speed with which the patient died. The size and shape of the bacilli do not, however, agree with the assumption that they were the bacillus septicus. They were only half the usual size of that bacterium, their ends were more rounded, and they did not grow in strings. They were much more like some form of bacillus coli communis. As I have already said, both this and other bacilli can cause emphysema and inflammation of cellular tissues. The coexistence of the streptococcus pyogenes with the bacilli affords food for reflection. In cutaneous erysipelas and cellulo-cutaneous erysipelas streptococci growing by themselves do not often cause a fatal ending. Nevertheless, the streptococci in this case may have played an important part by producing that absence of oxygen, and perhaps supply of toxins, which the bacillus septicus and the rest of its family require for their proper growth. It is obvious that the conditions would be much more favourable for the growth of the bacillus septicus or similar anaerobes if the tissues were packed with oxygen-loving bacteria, like the streptococcus pyogenes. Further, we might speculate whether an excessive consumption of alcohol may not also help to produce similar favourable conditions. It is, I believe, supposed that alcohol uses up oxygen, which would otherwise go to the tissues.

CONSECUTIVE INFECTION: THE PATHOLOGY OF HECTIC FEVER.

When septic infection occurs during the course of other diseases, its effects, being confused with those of the original disease, are often overlooked or wrongly attributed to other causes. Thus in the course of tuberculous affections, such as chronic tuberculous arthritis or tuberculous caries, a newly-formed sinus or an ill-advised incision is often the starting-point of a new infective process, which is most destructive to the tissues previously deteriorated by the tuberculous inflammation. Locally, the effects of the new septic infection are often attributed to the original disease, and after it has become generalised the septicæmia is not usually, I believe, recognised as such. The symptoms which accompany it are designated "hectic fever," a phrase unrepresented by any definite morbid anatomy. When septic infection is implanted upon an already established morbid process I propose to call it "consecutive infection." The following is an instance of it both in its local and in its general manifestations.

CASE 22 (Fig. 27).—A young man had suffered for many months with tuberculous arthritis of the knee. A peri-articular abscess formed and was opened. It extended deeply towards the joint, but was not known to communicate with it. This opening ultimately healed, but the knee became stiff and bent. The joint was straightened without apparent ill-effects, but soon after the patient was readmitted, and it was clear that a septic arthritis had been engrafted upon the chronic tuberculous arthritis. The usual local and general symptoms existed together with others, which pointed to breaking-down tuberculous disease of the lungs. There was also an unusual feature in the case. His urine had hitherto been normal, but now a very large quantity, of low specific gravity and containing albumen, was passed. The patient died, it was supposed, of hectic fever and exhaustion, with amyloid disease. Afterwards I found an incision on the inner side of the knee, by which a finger could be passed into the joint. The synovial membrane was tuberculous and thickened, and there was complete erosion of the articular cartilages, with caries and necrosis of the tibia, especially near the outer condyle. The lungs were tuberculous and breaking down, with engorgement of the lower lobes. There was also tuberculous ulceration of the cæcum and right colon. The spleen, liver, and kidneys were enlarged and amyloid, and in addition the kidneys had the naked-eye appearances of parenchymatous nephritis; indeed, they were afterwards used at the morbid histology class to demonstrate that not infrequent combination of parenchymatous nephritis and amyloid infiltration.[28] But an investigation by Gram's method of staining threw fresh light upon the morbid condition; interspersed throughout the cortex of the kidney were numerous bacilli, singly and in chains, also cocci and diplococci, and capillaries blocked with micrococci. So far as the cocci are concerned these appearances were the same as those which are experimentally produced by the injection of cultures into the veins of rabbits. By the eosin and methyl-blue method of staining the capillaries blocked with micrococci were conspicuous objects, mainly situated beneath the capsule of the kidney (Fig 27). Although not quite sure, I thought the emboli were probably composed of streptococci. The bacilli were sparsely scattered and were apparently post-mortem in origin.

The foregoing was, as I have said, considered a typical instance of hectic fever, but whatever that may be there is no doubt but that the youth had septicæmia. Long before this, in 1889, I endeavoured to solve this question of hectic fever being in reality a symptom of septicæmia by inoculating gelatin, agar agar, and serum from the blood of patients with hectic fever. The blood was taken in the usual way from the finger and with the usual precautions. The result

[28] Ernst Ziegler: Text-book of Pathological Anatomy, Part 2, p. 59. Translated by D. Macalister. 1886.

was negative in the case of a man aged twenty-two years with tuberculous disease of the hip of four years' duration and with abscesses; also in that of a youth aged nineteen years, who had had morbus coxæ since the age of six. In spite of this failure, I think that this line of investigation ought to be followed up and extended. Indeed this has recently been done, for the occurrence of a mixed infection in tubercle of the lungs has been signalised by Jakowski.[29] He investigated the blood during the hectic stage by cover-glass preparations and cultures. Two out of nine cases gave negative results. In two staphylococcus aureus was found, in two streptococcus pyogenes, in two staphylococcus aureus and albus together, and in one streptococcus pyogenes and staphylococcus aureus. The same point has been written upon by Petruschky,[30] who remarks upon the frequent coexistence of steptococci and tubercle bacilli in sputum and pulmonary tuberculous abscesses. He attributes secondary infection to these streptococci, and advocates early diagnosis and early treatment of the primary tuberculous disease. Although it is well known that tuberculous processes are often complicated by the presence of other kinds of bacteria hardly anything has been written

FIG. 27.

Hectic fever. Micrococcus emboli in the capillaries of the kidneys. The kidneys were also in a state of parenchymatous inflammation with amyloid disease.

about their presence in the circulation. Mr. Watson Cheyne[31] has mentioned a case in which he found micrococci in the vessels of tuberculous patients. He did not at that time lay much stress upon them, but said, "though quite independent of the disease, [they] probably hastened the death of the patient, or they may have been present simply as the result of lowered vitality, ... though in that case I have never found them as plugs in the vessels." Cornil and Babes in a case of tuberculous caries of the spine found vessels filled with streptococci.[32] The same microbe was also found by them in the pulmonary glands, peritoneum, and meninges of other cases of tuberculosis. Koch[33] has described a case of acute general tuberculosis in which many capillaries were blocked for a short distance by micrococci. He thought that a mixed infection of this kind would, if looked for, be found tolerably often. Much work remains to be done before we shall know whether the phenomena of hectic fever are always due to a consecutive infection. The ptomaines of tubercle bacilli are in themselves able to cause marked rises of temperature, as was seen during the attempt to treat tuberculous diseases with Koch's tuberculin. Although the foregoing mainly refers to consecutive infection in tuberculous disease, there is, I think, no doubt but that it may occur after any form of infective disease which produces the necessary conditions. Amongst these it is probable that typhoid fever ought to be included. That disease sometimes seems to terminate by the superaddition of a septicæmia, the blood becoming infected through the intestinal ulcers.

[29] Beitrag zur Frage über die sogenannten Mischinfectionen der Phthisiker. Untersuchungen des Blutes der Phthisiker in der hektischen Periode. Centralblatt für Bakteriologie, vol. xix., 1893, p. 762.

[30] Tuberculose und Septikämie. Deutsche Medicinische Wochenschrift, No. 14, 1893. Ref. Centralblatt für Bacteriolcgie und Parasitenkunde, Band xiv., 1893, p. 216.

[31] Report on the Relations of Micro-organisms to Tuberculosis. The Practitioner, April, 1883, p. 302.

[32] Les Bactéries, third edition, vol. ii., p. 455.

[33] Etiology of Tuberculosis; translated by Stanley Boyd. New Sydenham Society, 1886, p. 105.

TEN FATAL CASES OF ACUTE IDIOPATHIC CEREBRO-SPINAL MENINGITIS.

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ACUTE cerebro-spinal meningitis, for which no obvious cause can be found, is not on the whole a common disease. Ten fatal instances of it occurred at St. Bartholomew's Hospital during the six years that I was medical registrar there (1887-1893), and the physicians kindly give me leave to publish a short account of them. All cases are excluded wherein any recognised cause could be found, such as tubercle, injury, otitis, disease of the skull-bones, pyæmia, ulcerative endocarditis, pneumonia, erysipelas, &c., and also those in which only the cerebral membranes were affected (though doubtless some of these do not essentially differ from the cerebro-spinal cases) or in which post mortem the examination of the cord was omitted. In addition to the ten fatal cases there were three (or perhaps four) cases during the same period which recovered. Unfortunately, I can give no sufficient account of the bacteriology of these ten cases, which to many may seem their chief point of interest; but in a subsequent case occurring since my term of office Dr. Kanthack[1] demonstrated the presence of the pneumococcus; and our present registrar, Dr. Herringham,[2] notes that this organism has been found in two other recent cases. This, I believe, is in accordance with the majority of bacteriological observations on the subject. Nor have I anything to say as to their etiology generally, save that one case (No. 4) developed meningitis in the course of some acute throat affection, and four out of the ten (of which No. 4 was one) occurred between March and June, 1890. This is an unusual number for such a short time, and the fact suggests the possibility of some epidemic influence. As a matter of fact, an epidemic of meningitis did occur in the summer of that same year in the Eastern Counties.[3] It is, indeed, possible that idiopathic meningitis does not differ essentially from the epidemic disease. The clinical resemblance may be illustrated by a case admitted under Dr. S. J. Gee in October, 1892. A child had been seized with vomiting, fever, and delirium; on admission she had retraction of the head, and a papular and petechial rash, with some larger purpuric spots. Later she developed a purulent infiltration of one eye, leading to its complete disorganisation, and arthritis in the knee; finally, she recovered, and was discharged after being four months in the hospital. This might serve as a picture of epidemic cerebro-spinal meningitis, but there was no epidemic]

The cases that follow are given in chronological order The clinical notes are taken from the records in the ward-books; the notes of post-mortem examinations, except where indicated, were my own work.

CASE 1.—(The onset took place with a fainting attack, then pains in the head, mental alteration, noisy state, and fever. Thereupon strabismus supervened, and finally coma, with Cheyne-Stokes breathing. Death took place in five days.) The patient was a boy aged six years, and was placed under the care of Dr. W. S. Church in the Matthew Ward in April, 1890. He was in his usual health till April 15th, when he was brought to the surgery for circumcision, but the operation was deferred because he fainted whilst walking across the hospital square. The next night he had pains in the head, strangeness

[1] Transactions of the Pathological Society, vol. xlv. (1894), p. 230.

[2] St. Bartholomew's Hospital Journal, December, 1894, p. 46.

[3] Bruce Low: Twentieth Annual Report of the Local Government Board, 1890-91, p. 117.

of manner, drowsiness, and diarrhœa. He had measles two years before, with diarrhœa. On the 16th he lay on his back, putting his hand to his forehead as if in pain, the temperature being 103° F., with hot, dry skin; the pulse 144, regular and soft; and the respiration 36. On the 17th he was restless and noisy all night, screaming as if in pain, and putting his hands to his head. The temperature in the morning was 100°, and in the afternoon 103°. On the 18th he had a very bad night, shouting much, though conscious. There was internal strabismus of the right eye; the fundus of both eyes was normal. The temperature in the morning was 104°, and in the afternoon 103·8°. On the 19th he passed a very restless night. He had now double internal strabismus. The temperature was 102·8°. At 2.40 P.M. he was quite unconscious, with Cheyne-Stokes respiration; the pupils were contracted, and the strabismus had gone. The pulse was 135, but otherwise good. He died on the same day.

Necropsy.—There was sticky greenish-yellow lymph beneath the cerebral arachnoid, alike upon the convexity and the base (upon the former mainly in large patches and at the latter on the olfactory bulbs, optic commissure, and behind it); in the Sylvian fissures, where the membranes also looked thickened; and a small patch on the cerebellum. The convolutions of the brain were flattened, the surface was pale, and much turbid brownish fluid escaped during removal. Similar turbid fluid was present in the sac of the spinal dura mater, and in the spinal arachnoid there was thick yellow lymph, mainly upon the posterior surface of the cord. The cervical region was free, the deposit of lymph beginning in the upper dorsal region, and increasing in amount from thence downwards. There was some softening of the dorsal and lumbar cord. Except for a swollen gland at the left angle of the jaw (non-tuberculous and not caseating) and some œdema of the lungs, there was no other disease in the body

CASE 2.—(The onset occurred with vomiting, petechial rash, headache, and screaming. There was herpes labialis on the third day, followed by strabismus and retraction of the head. Some improvement took place after a week's illness; but the patient became apathetic and wasted much. In the third week there was recurrence of the vomiting, the head was retracted, the knee-jerks were absent, and death took place about the twenty-fifth day. This case was complicated with whooping-cough. Post mortem there were found cerebral and spinal meningitis and much ventricular effusion.) The patient was a boy aged five and a half years who was under the care of Sir Dyce Duckworth in the Elizabeth Ward of St. Bartholomew's Hospital in March, 1890. The illness began on March 2nd with vomiting and fever. During the following night he woke up struggling and screaming. On the 3rd, at 10 A.M., the mother noticed a red rash on his hands, arms, and face, which in an hour's time had spread to the legs and had turned black. There had been measles in the street where he lived, but this complaint he was said to have had before on two occasions. A younger brother had whooping-cough. The patient had had a cough for a month, which had become worse since this illness. He now seemed to be ill and drowsy, the tongue being furred and the throat normal. There were minute purpuric spots on the face, trunk, and limbs; on the left thigh there were one or two papules; on the left buttock there was a small ulcer with purpuric areola. The temperature was 99° F. On the 4th vomiting occurred in the night and early morning. There was a purpuric spot on one conjunctiva. The pulse was small and very irregular. Some small glands could be felt under the left angle of the jaw. On the 5th vomiting occurred at night. The patient suffered from frontal headache. The purpuric spots had mostly faded. Herpes appeared on the upper lip. The temperature rose during the day to 102°. On the 6th he screamed violently during the night. He appeared to have abdominal pain as well as headache. The vomiting was less at midnight. Internal strabismus was noticed, as well as retraction of the head. The temperature varied from 100° to 101°. During the next few days there was some improvement, especially as regarded the vomiting; but whooping-cough developed. On the 12th the temperature rose to 102·4°, and on the 13th to nearly 103°. On the 13th he lay in an apathetic state, screaming on palpation of the abdomen; he screamed occasionally during the night from the headache. Knee-jerks were absent. On the 16th it was noted that he was becoming much emaciated. On the 24th vomiting recommenced. He lay on his back and side, with the head retracted and the legs drawn up, noticing nothing, but not unconscious. The temperature varied from 99° to 101°; the pulse was 136. He died on the 26th. The eyes were examined, but nothing more was noted than a slight blurring of one disc, probably physiological.

Necropsy.—In the arachnoid, at the base of the brain, from the optic nerves to the crura cerebri, there was a layer of thick puriform stuff; the Sylvian fissures were gummed together, but no tubercles could be made out, and no tubercle bacilli could be found in the exudation. The convolutions were flattened, the corpus callosum was much thinned out and softened, and the ventricles were much distended with fluid. There was a patch of puriform stuff in one choroid plexus. As for the spinal cord, much fluid escaped on incising the dura mater, the arachnoid was rough, and in the lower dorsal region yellowish lymph was seen. There was much superficial softening of the cord. All the other organs of the body were healthy.

CASE 3.—(There was pain in the head, with hallucinations, vomiting, fever, and ptosis. Herpes of the lips and face supervened on the fourth day with albuminuria. Death took place at the end of four days.) The patient, a boy aged nine years, was admitted to the John Ward under the care of Sir Dyce Duckworth in April, 1890. He was quite well and at school on April 24th, and slept well that night; but on the morning of the 25th he woke up "silly" about 7 A.M., wandering, complaining of pain in the head, saying that "his sight was blighted," and apparently suffering from hallucinations of vision. Ever since he had been partially stupid, particularly during the night, had vomited what he took, and had had some ptosis of the right eyelid. Nevertheless, he was able to come alone to the surgery on the 26th; but as the stupor and headache increased he was brought again at midnight and admitted. The temperature then was 103·4° F. On the 27th he looked ill and flushed, and had an expression of pain. He objected to being examined. He tossed about restlessly, and complained, when asked, of pain in the head and in the back. He saw mousetraps, marbles, and his boy friends, and talked to them. He nevertheless answered easy questions and put out his tongue when asked The tongue had a patchy fur upon it and was dry. The temperature was 101°, the pulse 140, and the respiration 35. There was partial ptosis of the right eyelid. In the afternoon there was well-marked double internal strabismus; the knee-jerks were natural. There had been some twitching of the right side of the face. The temperature was 104°. On the 28th it was noted that he had had no sleep since admission, being restless and noisy. There was much herpes on the lips and cheeks. The temperature was 100° (rising to 103° in the afternoon), the pulse 116, and the respiration 40. The urine was of sp. gr. 1026, and contained no sugar, but much albumen. During the next night the temperature fell to 98° and then rose again rapidly to 105°, after which he died.

Necropsy.—On the convexity of the brain, along the course of the veins, there was yellow, purulent lymph in the meshes of the pia-arachnoid. There was lymph at the base also, but less in quantity. The brain was reddened and softened on the surface. The cervical part of the spinal cord was superficially reddened, but there was no lymph. At the upper dorsal region a layer of lymph began and thence continued downwards, getting thicker near the lumbar region. It was limited to the posterior surface of the cord. In appearance the lymph was thick and purulent. There was some slight softening of the dorsal cord. The dural sac contained some dirty fluid. Except for some trivial swelling and reddening in the arytenoid region of the larynx and a slight enlargement of the mesenteric glands, all the other organs were normal. The appearance and distribution of the lymph in the cerebral membranes did not suggest tuberculous meningitis; no tubercle could be seen by the naked eye, and Mr. Edgar Willett, who kindly examined the spinal lymph microscopically, could find no bacilli in it.

CASE 4.—(On the fourth day of an acute inflammation of the fauces headache set in and albuminuria, with recurrence of fever. On the fifth day the headache was worse and consciousness was impaired; then there was a rigor, followed later by hallucinations of vision and a restless, tremulous state. On the sixth day there was laryngeal obstruction (œdema?), which was relieved by tracheotomy, after which occurred coma, conjugate deviation of the eyes, twitching of the arms, Cheyne-Stokes breathing, and hyperpyrexia. Death took place about forty-eight hours after declaration of the nervous symptoms.) The patient, a man aged thirty-eight years, was admitted under the care of Sir Dyce Duckworth into the Radcliffe Ward, St. Bartholomew's Hospital, in June, 1890. On the morning of June 19th he was taken ill

with vomiting, sore-throat, difficulty of breathing, and pain in swallowing, and a swelling developed in the right side of the neck. The same evening he came to the surgery looking very ill, the temperature being 103·5° F., the pulse 140 and feeble, and the respiration 36 and stridulous. The fauces, right tonsil, and the right side of the palate were œdematous, and no membrane was to be seen. Scarification was performed with some relief. He stated that his previous health had been good; he knew of no diphtheria in his neighbourhood, but the drains were said to be bad where he lived. On June 20th he was admitted to the Radcliffe Ward. His neck was swollen, especially on the right side; the fauces were also swollen, especially on the right side, and generally reddened, except the uvula, which was pale and thickened. There was a doubtful appearance of membrane on the right side of the fauces (which seems not to have been confirmed later). The temperature was 99·8°, the pulse 99 and of good volume and tension, and the respiration 16. The urine contained no albumen. Till the evening of the 22nd he progressed favourably, and the faucial inflammation went down considerably. The temperature was normal in the early morning, but in the course of the morning it rose to 102·8°, and at 7 P.M to 104·8°. He had some headache all day, which became worse towards night. The tongue was much furred. The urine contained one-third albumen. On the 23rd, since 2·30 A.M., he was restless, with violent pain in the head, and only partly conscious. He had a rigor in the early afternoon, the temperature, which had been 102° in the morning, mounting to 104°, the heart's action being feeble and irregular. At 6·15 P.M. he had hallucinations of visions, trying to get out of bed, and picking at the bed-clothes; his hands were tremulous, and the tongue was dry, furred, and tremulous. On the 24th he had a sleepless night. There was twitching of the tongue and limbs, with some œdema of the fauces, and poor entry of air into the lungs. In the course of the day urgent laryngeal symptoms set in—stridor, recession, blueness, &c.—for which tracheotomy was performed about midday with considerable relief. At 2 30 P.M. he had been apparently sleeping since the operation; there was conjugate deviation of the eyes upwards and to the right; the breathing was of the Cheyne-Stokes type; the pulse was small and flickering, and the temperature 105·8°. He became worse during the afternoon, had twitching of both arms, and the temperature rose to 108°. He died at 5·50 P.M.

Necropsy by Dr. HAIG.—There was purulent meningitis, most marked on the convex surface of the brain and over the frontal lobes, extending also into the transverse fissure and to the velum interpositum. There were similar changes, but much less marked, at the base, round the medulla, and in the Sylvian fissures. The cerebral ventricles contained some slightly turbid, non-purulent fluid. There was some spinal meningitis, becoming evident at the lower part of the cervical enlargement and extending down to the cauda, being most marked on the posterior surface of the cord. In the larynx comparatively little was seen to account for the dyspnœa, but there was some œdema both of the false and true cords. There was no membrane. The heart weighed 15 oz.; the muscle substance was pale and showed fatty changes; the left ventricle was somewhat dilated. The spleen weighed 11 oz. and was soft and pulpy. The liver weighed 66 oz. and was normal in appearance. The kidneys weighed 18 oz. the pair; they were generally enlarged, the structure of their cortex being somewhat blurred; the capsule did not peel well—probably there was some increase of fibrous tissue. The other organs were natural.

CASE 5.—(Rigor followed by headache; in four days' time delirium, then coma, rotation of head and eyes to the left; albuminuria; death on the seventh day.) A man aged thirty-nine years was admitted into the Mark Ward of St. Bartholomew's Hospital under the care of Dr. Andrew in January, 1891. On Jan. 3rd, at noon, having been previously quite well, he shivered and could hardly get home. Since that time he had been in bed, complaining of his head, and had vomited once. On the 5th he shivered for hours, became hot afterwards, and sweated. On the 7th he was light-headed. On the 8th (after admission) he looked ill, with the face drawn and black sordes on the lips. He was delirious and restless; his breathing was noisy, 44; and the temperature was 102·5° F. The tongue was dry, with brown fur; the eyes deviated to the left. He lay with his head to the left, and seemed inclined to roll to that side. He did not understand or answer questions. On the 9th he was comatose and passed fæces in the bed; the urine (drawn by catheter) contained albumen, but no sugar. His breathing was rapid, his colour more blue, the pulse 160 and very weak, and the temperature 101°. He died on the same day.

Necropsy.—In the subarachnoid space of the brain there was a thick layer of yellowish-green, purulent lymph covering the convexity of the brain on both sides. The same was observed in the interpeduncular space, over the surface of the cerebellum, and in the Sylvian fissures. The brain itself was normal. There was much lymph, like that on the brain, along the whole length of the spinal cord, except in the cervical region, where the membranes were only injected. The lymph was most abundant on the posterior aspect of the cord, though present on the anterior aspect also. The heart weighed 15½ oz., the left ventricle was thickened, but the valves were normal. The right suprarenal was cystic, consisting of a thickened, reddish wall, enclosing a cavity full of thick fluid. The left suprarenal could not be identified, and there was much hard, yellow fat in its place. The right kidney was rather small, pale, and soft; the left kidney was in its lower part like the right; in its upper part the renal substance was thinned and atrophic, and the capsule was very thick. The spleen was large, soft, and wrinkled.

CASE 6.—(There were vomiting and strabismus for about a fortnight before admission; after admission there were drowsiness, retraction of the head, and occasional strabismus, but no fever. The patient died about a month from the commencement of the symptoms. There was meningitis of the cord and the base of the brain and much hydrocephalus.) The patient, a female infant aged six months, was admitted into the Hope Ward of St. Bartholomew's Hospital under the care of Dr. Andrew in February, 1891. She was well till Jan. 1st. but had since then suffered from cough and loss of flesh. She had vomited during the last fourteen days, strabismus occurring about the same time. On Feb. 19th (when she was admitted) she looked very pale and the lips were rather blue. She was drowsy, the head being retracted and the eyes staring; there was slight internal strabismus at times. The temperature was subnormal and the pulse feeble and irregular. The optic discs were not quite clear, but there was no definite neuritis. The subsequent notes indicate very little change. The head was usually retracted; there was strabismus from time to time; the pulse was frequent, feeble, and irregular, and the temperature was normal or subnormal. On March 3rd the patient died.

Necropsy.—Beneath the cerebral arachnoid there was a very thick deposit of greenish lymph in the interpeduncular space; the Sylvian fissures were quite free. The cerebral ventricles were enormously distended with clear fluid. A thick deposit of lymph covered the spinal cord also, being most marked in the dorsal and lumbar regions, though visible in the cervical region also. There was no evidence of tubercle, and all the thoracic and abdominal viscera were normal.

CASE 7.—(There was a doubtful history of a blow on the head. The onset occurred with vomiting; there was nocturnal restlessness, and on the next day stupor with restlessness. On admission there was left-sided paralysis and the knee-jerks were absent; the coma was deepening, and death supervened with signs of pulmonary congestion and a tendency to Cheyne-Stokes breathing. There was moderate fever (99·5° to 102° F.). Death occurred on the fifth day.) The patient, a girl aged three years, was admitted into the Elizabeth Ward of St. Bartholomew's Hospital under the care of Sir Dyce Duckworth on Dec. 4th, 1891. On Dec. 2nd, on coming home from school, she said that a boy had hit her on the head. That day she vomited several times, and during the next night was restless, tearing her hair and throwing the bedclothes about. On the next day, Dec. 3rd, she again complained that a boy had hit her on the head. Since then she had not spoke rationally or recognised anyone, but had lain tossing about whining and muttering. On admission she was restless and tossing about. There was no rash and no evidence of injury to the head. She did not seem to notice a strong light. There was no strabismus, the pupils were normal, and there was no optic neuritis. She passed everything under her. There was weakness of the whole of the left side. Neither knee-jerk was obtainable. The plantar reflex was present on the right but absent on the left side. The temperature was 99·5°. On the 5th she was much worse. She lay quietly on her back. There was complete left-sided paralysis, including the upper face. There was conjugate deviation of the eyes to the right and scarcely any corneal reflex. The temperature in the morning was 102° and in the evening 100°. On the 6th, at 3.30 A.M., her complexion was dusky; there were tracheal rá'es; the respiration was 40,

with a tendency to Cheyne-Stokes rhythm; the pulse could not be felt at the wrist; the heart beats were 156; and the temperature was 102°. She died at 10 A.M.

Necropsy.—There was no sign of injury either to the skull or elsewhere. On either cerebral hemisphere, beneath the arachnoid, and principally on the lateral and upper surfaces, there were large tracts of thick, yellow, purulent lymph. At the base there was some lymph covering the imfundibulum and optic commissure, and a little on the under surface. There was none in the Sylvian fissures (till the lateral aspect of the brain was reached), nor were the lips of the fissures adherent. No tubercles were seen, nor did the appearances suggest tuberculous disease. The convolutions were flattened, and the surface of the brain was pale and sticky and bulging through the incised dura mater; yet there was no excess of fluid in the ventricles or any inflammation of the choroid. The sections of the brain were pale and soft. As for the spinal cord, dirty fluid came from within the dural sheath. In the lumbar and lower half of the dorsal region, on the posterior aspect of the cord, there was purulent lymph in the arachnoid, like that on the brain. There was none on the anterior aspect of the cord or on either aspect of the cervical and upper dorsal cord. The nerve roots of the lumbar and lower dorsal regions were red and swollen. The cord itself was somewhat softened at the periphery, but otherwise normal. Coming to the chest, there were one or two oldish adhesions of either pleura. There was reddening and roughening of the left pleura. No pneumonia existed. One small caseous gland was observed at the root of the left lung. The abdominal organs were normal. Dr. F. Andrewes kindly examined the cord for micro-organisms and gave me the following (verbal) report: "No diplococci pneumoniæ. Numerous bacilli, which would not grow in cultures. The only organisms which could be got to grow resembled the streptococcus pyogenes aureus."

CASE 8.—(The patient had had a convulsive fit in the street and was brought in semi-comatose after this. A second fit followed, with persistent coma, deviation of the eyes to the left, and a rise of temperature. Death supervened in about thirty hours.) The patient, aged fifty-two years, was placed under the care of Dr. W. S. Church in February, 1892. On Feb. 17th, while walking in the street, he was noticed by a policeman to fall in a fit. According to the description given there were tonic and subsequently clonic convulsions, with frothing at the mouth. When brought to the hospital (5.30 P.M.) he was semi-comatose and unable to tell his name, or, indeed, to speak. The stomach was washed out; there was no alcohol in it, though it appeared from the statements of his friends that he was a heavy drinker. While being put to bed in the Surgery Ward he had another fit, with clonic contractions and afterwards rigidity. The temperature was then 103·2° F. He remained unconscious all night; there was conjugate deviation of the eyes to the left. The temperature next morning was 105·6°. He was moved to the John Ward. On the 18th he lay unconscious, with the limbs rather rigid; he moved the limbs when stimulated, but not in a purposive way; there were frequent slow movements of the fingers like those of athetosis. The temperature was 102·2°; the respiration was 48 and laboured; the pulse was rapid and of poor volume. The knee-jerks were normal; the plantar reflexes could not be obtained, and he did not swallow well. At 9.30 P.M. the temperature was 104·3°, the pulse was much weaker, and the respiration was more laboured. He died during the same night.

Necropsy.—There were the remains of an old ulcer on the left leg, but it was perfectly quiescent, and the bone beneath it was not diseased. There was a purulent effusion into the subarachnoid space, extending over the whole convexity of the brain; in the anterior half, for some two or three inches from the longitudinal fissure outwards, it formed quite a thick sheet, which could be peeled off. A similar, though less marked, effusion covered the interpeduncular space and the upper surface of the cerebellum. There was none to speak of in the Sylvian fissures. No tubercles were visible. In the choroid plexus of the ventricles there were several small cysts with soft yellowish contents. The brain itself was normal. There was no ventricular effusion. Coming to the spinal cord, there was turbid fluid within the dura mater. Beneath the arachnoid there was a purulent effusion like that on the brain, but more liquid. There was none on the anterior surface of the cord. Of the posterior surface, the cervical region was nearly free, but the whole dorsal region was covered with effusion; the surface of the lumbar enlargement was reddened, but showed no effusion. The cord itself was natural on section. The apex of the right lung was puckered, containing some fibroid spots and a little grey translucent tubercle. The spleen was very soft and not notably enlarged. The liver was probably fatty. The left supra-renal contained a few small spots of quite doubtful nature. One kidney contained a curious cyst, in which was some slimy stuff having the colour of fæces.

CASE 9.—(The onset occurred with vomiting and headache; the latter was persistent and occipital, and there was pain in the neck, back, and limbs. The neck was stiff and tender. There were slight strabismus and nystagmus, and incipient optic neuritis (?). The patient suffered from wandering at night and tremors of the hands. Death occurred in about twelve days from the onset.) The patient, a young woman, was admitted into the Faith Ward of St. Bartholomew's Hospital under the care of Dr. W. S. Church in November, 1892. A week previously she had had a so-called "bilious attack"—viz., retching, vomiting, and headache—and since then constant occipital headache and gradual onset of pain in the neck, back, and arms. The neck was stiff for three or four days. The bowels had been confined for the last week. On Nov. 29th the temperature was 101·4° F., the pulse 76 and soft, and the repiration 30. The neck was stiff. There was tenderness over the third and fourth cervical vertebræ, and the hands were tremulous. There was slight internal strabismus. There were jerky lateral movements of the eyes on fixing any object. The urine showed a cloud of albumen (which cleared up, however, the next day). On the 30th she had a sleepless night, with much wandering, the temperature rising to 103·6°; in the morning it was 102·6° to 103·8°. The tongue was red and angry; there was a fleeting erythema about the chin and face; the hands were more tremulous, and the neck was still tender. During the next few days there was little change, save that the temperature fell somewhat (102°, 100°, 98°), while the pulse became more frequent on the whole. The abdomen became distended. The fundus of either side exhibited some old patches of choroiditis; the discs were ill-defined and woolly, but did not exhibit distinct optic neuritis. She died on the evening of Dec. 4th.

Necropsy.—There was found a large thrombus in each branch of the pulmonary artery; there was a little scanty lymph on the left pleura, with ecchymotic spots on the pleura, and there were two small infarcts in the left lower lobe. There was meningitis at the base of the brain—viz., a well-marked layer of thickish lymph covering the pons Varolii. Coming to the spinal cord, a well-marked layer of greenish-yellow lymph covered the posterior surface of the dorsal and lumbar regions. The arachnoid elsewhere—viz., in the cervical region and on the anterior aspect of the cord—was rather difficult to separate from the cord and perhaps a little thickened; but the meningitis as a whole was an acute process.

CASE 10.—(There was a history of headache and general pain, the patient a day later being found unconscious in the street. He made a very partial recovery, right hemianæsthesia ensuing. Later another fit occurred, followed by right facial palsy (?) and retraction of the head. Death supervened in about three days from the first symptoms.) The patient, a man aged fifty years, was admitted into the Mark Ward of St. Bartholomew's Hospital under the care of Dr. Andrew in February, 1893. It appeared that on the night of Thursday, Feb. 2nd, the patient had complained of headache and pains all over him. Nevertheless he took breakfast the next day and was supposed to have gone to work as usual. Nothing more could be found out about him till the evening, when he went into a coffee-house where the people thought him a little strange in manner. Next he was found in the road near the coffee-house, quite unconscious, some slight convulsive movement of the right hand being noticed. On being brought to the hospital (about 8 P.M.) he recovered consciousness to a limited extent and managed to raise himself and stand up, but did not answer when spoken to and only looked up with a dazed manner. He appeared to have less power in the right arm than in the left. His right conjunctiva was less sensitive than the left. He constantly put his left hand to his occiput. The temperature was 97° F. A pint of urine was drawn off, containing a considerable amount of albumen. He was put to bed in the Surgery Ward. His temperature rose to 101°; the pulse was regular and of moderate frequency; the respiration was unembarrassed, but irregular, being sometimes shallow, sometimes deep. He was found to have right hemianæsthesia. He passed his urine into the

bed. He was restless all night, but not violent, or quite unconscious of his surroundings. During the next day (Feb. 4th) he did not alter materially, except that he noticed a friend and seemed to recognise her. On the 5th, at 3 A.M., there was twitching of the left arm and face, with stertorous breathing. At 11 A.M. the face was drawn to the left. The right eye did not close (right facial paralysis). Retraction of the head set in, and the knee-jerks were found to be increased. The temperature rose from 100·2° in the morning to 104·4° at midnight, and he died early on the 6th.

Necropsy by Dr. H. M. BOWMAN.—Under the cerebral arachnoid, all over the convexity, there was a considerable amount of turbid fluid. The same was observed at the base, extending over the pons and lower surface of the medulla and about two inches up the right Sylvian fissure, which was rather glued up. As for the spinal cord, the dura mater was healthy, but on opening it there was found to be a considerable amount of pus beneath the arachnoid and an excess of turbid fluid; this condition extended down as far as the cauda equina. At both apices of the lungs there were dense fibrous adhesions, there being calcareous deposits in either apex, with fibroid thickening and puckering. The heart was large and flabby and weighed 14½ oz.; the right ventricle was much dilated. The spleen was small and healthy. The kidneys were large, weighing 8 oz. each; the capsule separated badly, tearing the cortex, but the section of the kidney looked healthy. No pus was found in any joint.

Remarks.—The symptoms in these ten cases may be summarised as follows. Pain in the head was complained of by all those patients who were not too ill or too young to complain; pain in the back twice, in the limbs once, and in the abdomen once. There was fever of variable degree in all cases save one (Case 6), which did not come under observation at the outset. There was no special type of fever. One case (Case 4) terminated with hyperpyrexia; a rigor is mentioned twice only. Vomiting occurred in five cases, and usually at the commencement of the illness. Retraction of the head developed, either a few days after the onset or at a later stage, in three instances, and a stiff neck (probably a minor degree of the same thing) once; rigidity of the limbs was observed only once or twice. Twitchings of the limbs, face, or tongue occurred about four times; actual convulsions only twice. The state of the knee-jerks, examined in five cases, was: absent twice, exaggerated once, and normal twice. Strabismus was frequent, occurring four times—sometimes early, sometimes late; ptosis occurred once, and doubtful nystagmus once. The fundus oculi was examined five times, and twice only was there a (doubtful) optic neuritis. There was no conjunctivitis, iritis, or panophthalmitis (as in Dr. Gee's case quoted above), and no otitis, deafness, or vertigo. As to paralyses, conjugate deviation of the head or eyes (whether this was paralytic or spasmodic) was observed four times, hemiplegia once, hemianæsthesia once, and doubtful facial paralysis once. Mental symptoms were frequent. There was restlessness or irritability in four cases, noisiness or delirium in three; there were hallucinations of vision in two cases, and drowsiness occurred sometimes. Early coma occurred twice. The pulse was usually frequent, being irregular in three instances. The respiration before death was apt to become irregular or to assume the Cheyne-Stokes type. Abnormal states of the tongue (red, dry, furred, &c.) are noted four times, diarrhœa is noted once, and constipation once. No mention is made of a *tache cérébrale*. In one prolonged case (Case 2) there was marked emaciation. Albuminuria occurred four (or, counting a transient appearance, five) times; but in three of these cases the state of the kidneys was questionable. Glycosuria did not occur; but that it may do so is shown by a case of (cerebral) meningitis admitted under the care of Sir Dyce Duckworth in 1891. A man was brought in comatose, his urine being loaded with sugar; diabetic coma was therefore suspected, but post mortem he was found to have purulent meningitis.[4] As to eruptions, a petechial rash was seen once (Case 2), a "fleeting erythema" once, and herpes facialis twice. The ages of the patients varied from six months to fifty-two years. Thus the commonest features of the disease were: fever of sudden onset and without obvious cause, headache, vomiting, restlessness, and even delirium, and soon afterwards strabismus and retraction of the head, and, finally, death, which was often preceded by irregularity of respiration or by coma, within a week. But some cases lasted longer—e.g., one for twelve days and two (Cases 2 and 6) between three and four weeks. In both of these latter hydrocephalus was found post mortem; possibly in Case 2 the recurrence of vomiting was the clinical indication of this. Further, as above mentioned, three, or perhaps four, cases (not included in these ten) recovered. In Case 8 the sudden onset, early coma, and rapidly fatal course (thirty hours), without the development of diagnostic symptoms, reminds one of the "type foudroyante," described by writers on epidemic meningitis. A clinical relation to other diseases only appears twice. In Case 2 the patient had whooping-cough, and had been exposed to measles; and in Case 4 the meningeal symptoms developed during an attack of acute faucial and laryngeal mischief, both diseases being possibly the result of some one unrecognised infection. Only one or two remarks need be made about the post-mortem examination results. Pneumonia was never found; pleurisy (in one case with pulmonary infarcts) twice only; the spleen was enlarged only in two instances, and in these the enlargement may have depended on other causes than the fever (Cases 4 and 5). As to the meningitis itself, the purulent character and the distribution of the cerebral exudation sufficed to distinguish it from tuberculous meningitis; the spinal exudation, though sometimes enveloping the whole cord, usually affected the posterior surface chiefly, and the dorsal and lumbar regions rather than the cervical.[5] Hence, to exclude a spinal meningitis it is not enough to look around the foramen magnum, or even at the cervical region of the cord, but the whole length of it must be examined.

Upper Wimpole-street, W.

[4] For two cases of glycosuria in meningeal hæmorrhage vide F. E. A. Colby, St. Bartholomew's Hospital Reports, xxviii. (1892), p. 153.

[5] Klebs: Virchow's Archiv, vol. xxxiv. Trevelyan: Brain, vol. xv., p. 104.

A STUDY ON THE TREATMENT OF NON-MALIGNANT STRICTURE OF THE PYLORUS.

BY PROFESSOR A. OGSTON, M.D. ABERD.,
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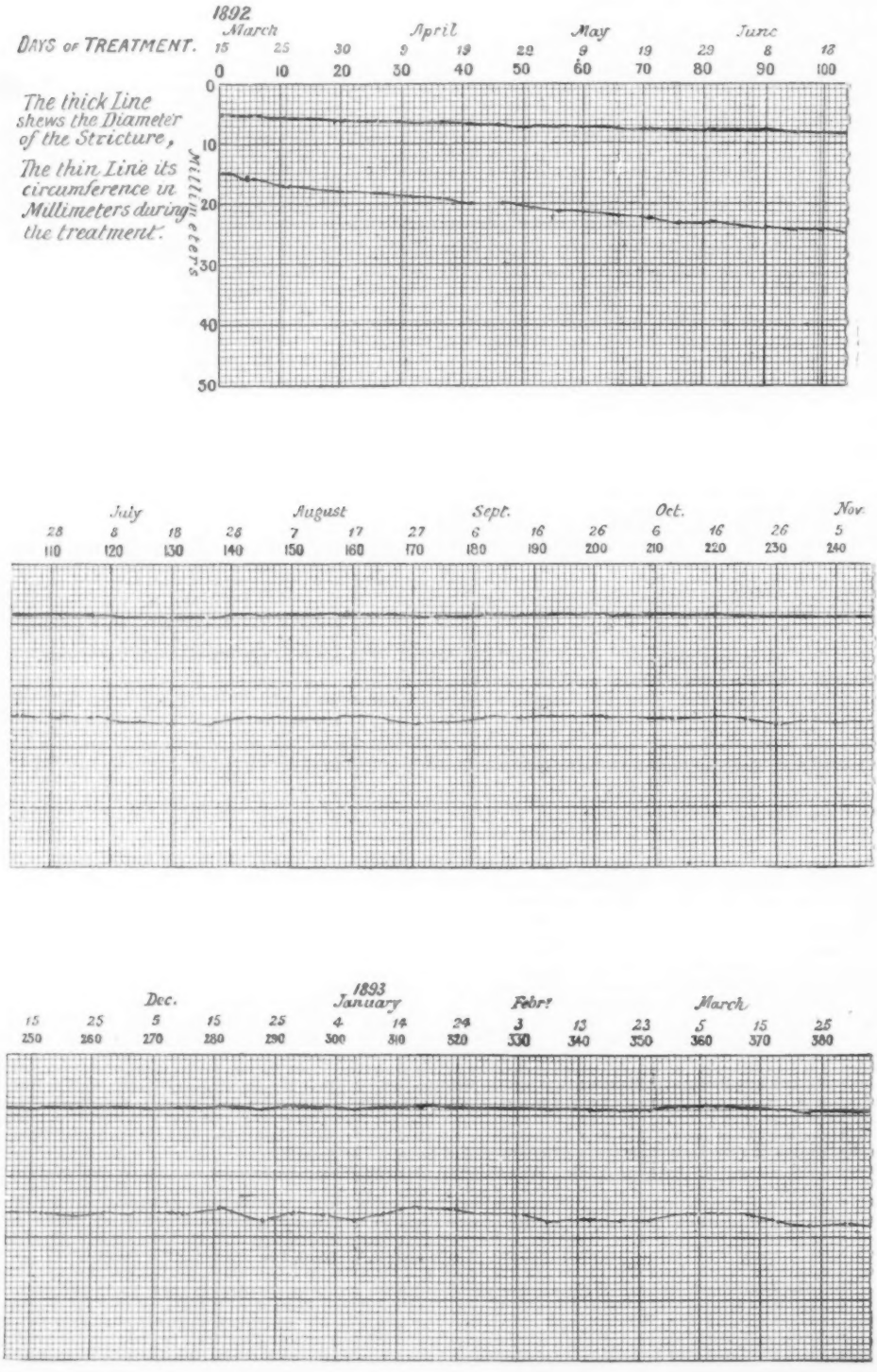
I COULD have wished before publishing the method of treating pyloric stricture without operation, with which this communication deals, that further experience of its efficacy had been obtained beyond that which it is in my power to offer. But in my experience non-malignant stricture is rare, and to wait for fresh cases on which to try it might entail almost indefinite delay. I have accordingly decided to make it known as it now stands, that it may, if they think well of it, be tested by others. It is now twelve years or thereby since Loreta drew attention to this stricture of the pylorus by his proposal to treat it by opening the stomach in front, introducing the forefinger into the wound and insinuating it into the stricture so as to expand it from within. The operation was a good deal practised, and with success. But most at least of the cases were only temporarily benefited, as recontraction slowly and surely occurred. And some of the cases were found to be due to the cicatricial contraction of former inflammations and adhesions around and external to the pylorus itself, and hence to be unsuitable for finger dilatation. Mikulicz's improvement upon Loreta's operation, that of incising the strictured bowel longitudinally and suturing the incision so as to form a transverse line of union and widen the bowel, has not been sufficiently tried and reported upon to enable a final verdict to be passed by the surgical profession upon its merits. It probably, however, shares to some degree the objections that are advanced against Loreta's operation. It entails an equal or greater danger to life, and is not suited for every case. In his communication to the Surgical Section of the International Congress at Berlin in 1890 Billroth mentioned that in seven cases he had, for cicatricial stenosis, to excise the pylorus, with the result of four cures and three deaths; to perform partial wedge-shaped excision without complete division in five cases, of which two recovered and three died; while of five cases where the pylorus was not absolutely narrowed, but only twisted by extensive external adhesions, he had in two to introduce the finger and explore by Loreta's method in three,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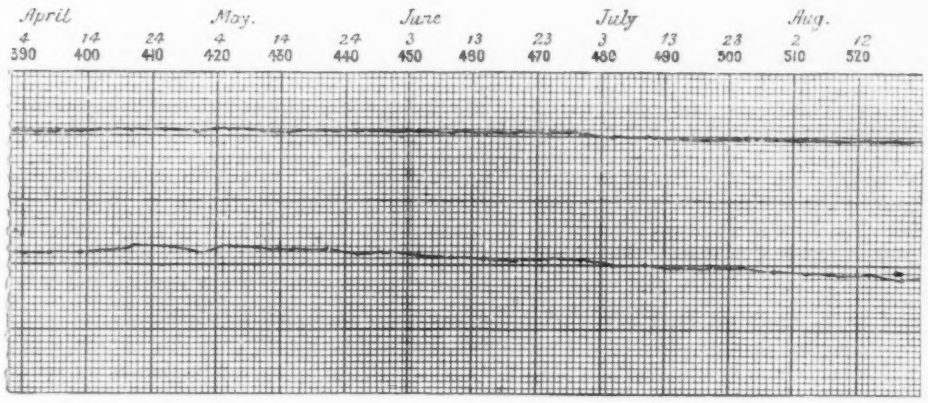
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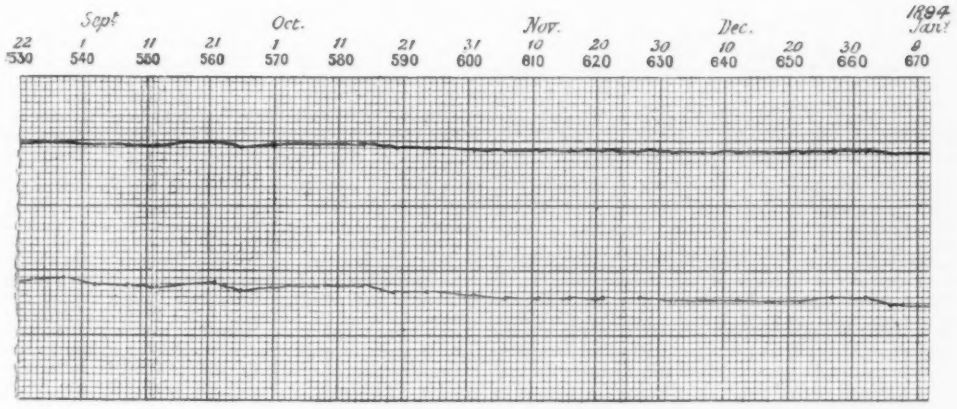
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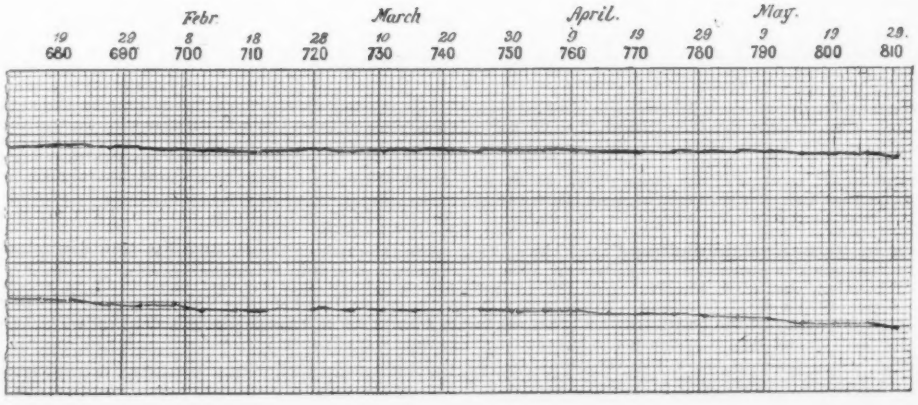
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all dying, the other two recovering after the adhesions, which were less extensive, had been separated. These are rather discouraging results, and it has further to be remembered that many of those who suffer from this stricture are in debilitated and broken health, from the dilated and weakened state of the stomach, and from the attacks of hepatitis and peri-hepatitis that have accompanied or caused the disease. Any method, therefore, that offers a fair prospect of effecting a cure without the risks that an operation entails is worthy of consideration; and such a method, now to be described, I have carefully tried, and from my experience of it am inclined to recommend in suitable cases of the disease. The method suggested itself in the following way. Having had to deal with a few cases of pyloric stricture I was led by the considerations mentioned above to consider whether some safer plan than operation might be devised for overcoming the stricture. Why should a pyloric stricture, or for that matter any non-malignant and therefore cicatricial stricture, of the intestinal tract not be dilated and cured by similar methods to those by which we dilate and cure those of the urethra and rectum? Why not pass through them something that would act in the same fashion as a bougie? It is evident that the passage through the stricture of a hollow viscus in any part of the body of the liquid or pulpy matters it contains does not dilate the stricture from within like a bougie. We have daily evidence of this in the œsophagus, rectum, and urethra. It is probable indeed that, in some instances at least, the narrowing of the part is rendered less rapid by this agency, and that in the stationary urethral strictures sometimes met with in elderly men it may arrest the stricturing process and prevent its becoming absolute. But the influence of liquid and pultaceous matters must be limited in causing dilatation by the fact that their chief energy is exerted on the walls of the viscus above the narrowest part of the stricture, where we find the dilatation that exists above all such narrowings. The moment the mass is propelled into the jaws of the stricture it experiences a diminution of pressure, owing to there being none below, and it escapes through without exercising more than a feeble influence on the narrowest part of the stenosis. Thus it fails to exercise any such pressure there as causes the local irritation, followed by moderate inflammation, softening, and yielding, which we believe to be the mechanism by which a bougie dilates. But since bougies are out of the question in non-operative treatment of the pylorus, it seemed probable that if solid spheres of the diameter of bougies suspended in the food were passed through the stenosis they might act like bougies and produce the same results. Whether the natural forces operating in propelling onwards the food would suffice to carry them through, and whether unforeseen difficulties might not arise, could be ascertained only by an actual trial. The first attempts were made with spheres of sugar coated with various substances which it was supposed would resist the digestive process until they had passed the pylorus; and several materials were made use of to form the spheres. But nothing was found suitable save gutta-percha rolled in the hand into globules, and these arranged into sizes by passing them through a gauge for urethral or œsophageal bougies. Gutta-percha spheres are easily and simply made, and, being of almost the specific gravity of the stomach contents, have no tendency to settle in the lowest part of the stomach or to float in the uppermost strata of its contents. The gauges chosen were those on the French scale, which gives a greater selection of sizes and a more gradual dilatation; but so sensitive is the pylorus that it was afterwards found convenient to mark intermediate sizes between two numbers, thus between, say, Nos. 20 and 21 would come 20+ and 21−, the former being one that passed with difficulty through No. 20 aperture, the latter passing with ease through No. 21 aperture of the gauge plate. It was at first thought that the spheres would be most efficacious if given by the mouth at night, the patient sleeping on his left side; but they were found to cause sleeplessness from restlessness of the lower extremities ("fidgets") and bad nightmares, so that this was abandoned, and they were given in the early morning, just after breakfast, and the patient allowed to go about his usual avocations. By this plan they caused less discomfort, and the only precaution taken was to forbid very hot food and liquids, which might have softened the gutta-percha so much as to destroy the rigidity of the sphere. They are found in the fæces, having passed through the alimentary tract without alteration. It is not difficult, by observation of the patient's symptoms, to form an approximate idea of the size of the pylorus in cases of stricture. If the pylorus be narrowed at all this is at once shown by the discomfort or suffering that follows the eating of large morsels of tough food, such as beef and mutton. Moderate mastication does not reduce such morsels full of tough fibrous structures to such a size as to permit of their passing through the orifice without inconvenience, and the patient experiences uneasiness or prolonged cramp-like pains, extending from the right epigastric region to the angle of the left scapula, an hour or two after eating, and continuing until they are relieved by a gurgle of flatus and food passing into the duodenum. Hence such patients avoid these articles of food instinctively, and select softer substances, like fish, or more finely divided foods, like minced meat, puddings, and pulpy articles of diet. If ordinary minced meat can be taken without discomfort, the stricture is certainly greater in size than a No. 10 or No. 20 urethral bougie of the French scale. If the orifice is less in size than this, only liquid and pulpy foods, containing no solid particles larger than boiled rice, can be taken without distress.

These data are of assistance in commencing the treatment as by regarding them the approximate size of sphere to use can be pretty well ascertained. The treatment is best commenced by administering immediately after breakfast a sphere which is considerably less in size than the estimated size of the stricture, the patient swallowing it like a pill in a mouthful of some cold liquid. If it causes no feeling of uneasiness in the pyloric region a larger size should be given next morning, and so on. When the effective size has been reached it will be known by its causing within twelve hours uneasiness or soreness in the pyloric region, and perhaps cramp-like pains in the stomach, until it has traversed the stenosed portion of the bowel. These pains are very characteristic, and as the treatment has to be guided by their appearance and nature a more minute description of them may be useful. After a sphere which just fits the pyloric stricture has been swallowed, a certain time, varying from three quarters of an hour to five or six hours, or even more, elapses without any unusual sensation, and then discomfort gradually comes on in the pyloric region, in nature something between a stitch and a cramp, and often accompanied by intermittent cramp-like pains extending along the stomach towards the spleen or left scapular angle. The former sensations I presume to be caused by the sphere irritating the pylorus as it passes through the stricture, and where the stricture is a long one the discomfort can be felt passing along it as the sphere advances, and finally it disappears with a rush or two of flatus as the sphere escapes into the duodenum beyond; the latter intermittent cramp seems to be due to the efforts of the stomach to overcome the obstruction. The amount of discomfort experienced by the patient is in proportion to the tightness with which the sphere fits the stricture; should this not be excessive, a slight soreness at most may be felt on the following day, or even for a day or two, when food is passing the narrow part; but if it be excessive the pain may be sharp, knife-like, or, like the pain of ulceration, may be accompanied by tenderness on pressure over the pylorus, and may continue for a day or two, or even a week or more. In this case it is generally associated with heart-burn and acidity, and is significant, I incline to believe, of small fissures or abrasions of the stricture having been caused, for the employment of alkalies and bismuth, to keep the contents of the stomach alkaline, is very serviceable in overcoming it. Such attacks occurring during the dilatation treatment demand care lest the size of the spheres be unduly increased before they have completely subsided, and until this takes place it is well to rest satisfied with maintaining the dilatation already obtained, and administer only spheres of the same dimensions, or even to use them a size smaller and allow it to retrograde somewhat. In the chart of a case that is given in this paper such a condition may be seen to have occurred and proved obstinate from the 120th to the 280th day of treatment.

After the size of the stricture has been determined the treatment consists in administering successively larger spheres at intervals of five days, or as nearly so as possible. If the sphere be of suitable size some uneasiness ought to be felt during its passage through the pylorus, and on this account it is advisable to administer it in the morning, for it is less annoying during the movement and occupations of the day than at night, when the discomfort is more observed, and gives rise to bad dreams, nightmares, insomnia, and sometimes nerve pains, resembling the pricking of a needle,

in the right lower extremity, or it may be in both lower limbs. Next day slight pyloric discomfort is usual after food, but is unimportant unless it become severe or prolonged, in which case the next sphere should be used of the same or a less size. The spheres produce no uneasiness in their passage along the rest of the intestinal tract. The accompanying chart exhibits the progress of cure in a case where the stenosis was due to inflammation and perihepatitis. It will be seen that the progress is very slow. I incline to think that it never can be otherwise in these cases if safety is to be ensured; but my experience is confined to four cases, of which that charted here was the only one satisfactorily observed. In it 810 days were required to dilate the stricture from sixteen to forty millimetres of circumference, as shown by the thin tracing, or from five up to fourteen millimetres diameter, as shown by the thick tracing. Sometimes, it will be observed, the dilatation made no progress for considerable periods, perhaps because great caution was observed. But on the whole the dilatation made steady progress, and the patient's condition and symptoms improved along with it. The dilatation has not been pushed beyond 40. French bougie scale, as with care in diet this is sufficient for the wants of the patient, and he suffers only when he eats unminced flesh. One of the other cases proved to be cancerous, and the treatment was given up. In the third case I could not learn the result, as the patient passed out of my hands; and in the fourth case the stricture was so small that only water, milk, and beef-tea could be taken, the stomach was dilated, and the patient died before it could be ascertained if even the smallest sphere had passed through. Operative measures were steadily declined in this case by the patient. No post-mortem examination was permitted, but I imagine the stricture was barely large enough to admit an ordinary probe. This shows that only where the treatment is early begun is there a good prospect of its succeeding. But in such cases, where the patient has the necessary intelligence and perseverance and the medical attendant can watch over, encourage, and direct him, I am satisfied that the results can surely be counted upon, and a perilous and doubtful operative procedure avoided. The method may possibly be employed with advantage in other strictures of the intestinal tract, but I have had no opportunity of employing it in any such.

Aberdeen.

A CASE OF CHOLECYSTENTEROSTOMY WITH THE USE OF MURPHY'S BUTTON.

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A SHORT time ago the notes of a case of successful enterectomy with the use of Murphy's button were published in THE LANCET.[1] I now record the history of a still more interesting case which has since been under my care. For want of a better term I have called the operation which I am about to describe "cholecystenterostomy," a fearful name indeed, and one which, after all, may not be applicable to the case in point. On Oct. 12th, 1894, I was asked by Dr. Clay to see a girl aged seventeen years, who had been brought to him for the first time on the preceding day. She had been ailing more or less for two years. In January, 1894, she became jaundiced, and a swelling formed under the liver. She had been treated by two medical men with mercury and other drugs; but in spite of their treatment the jaundice deepened and the swelling under the liver increased in size. They appear then to have told the parents that nothing more could be done, whereupon Dr. Clay was consulted. The condition of the patient when I saw her was briefly as follows. She was very deeply jaundiced; the urine was the colour of porter. The stools were white. She suffered no particular pain, had not been sick, and throughout her illness neither of these symptoms had been present. She was much emaciated. There was a large abdominal tumour reaching from below the liver to the brim of the pelvis and across the abdomen obliquely about three inches to the left of the umbilicus. The whole swelling was absolutely dull on percussion, and the merest tap on any part of it produced a thrill of fluctuation. Taking the sum of her symptoms we had little doubt that it was a distended gall-bladder, although the possibility of a hydatid cyst was suggested. I aspirated the tumour with a full sized aspirating needle, and we immediately perceived the characteristic fluid of distended gall-bladder. As if to make assurance doubly sure, towards the latter end of the aspiration a gall-stone struck the cannula repeatedly, and the click of impact was heard by Dr. Clay, the father, and myself. The quantity of fluid withdrawn was six pints and one ounce. No evil results followed the aspiration, and I did not see the patient again until Oct. 17th, when I found that the swelling was as large as ever. We then advised that an operation should be performed, and for this purpose she was removed to the private home for patients, and on the following day I operated on her. An incision about four inches long was made a little to the outer side of the right linea semilunaris. The integuments were very thinly spread over the tumour and the peritoneum was rapidly reached and opened. The cyst, being exposed and packed well round with small sponges, was tapped with an aspirating needle. Fluid of the same character as before was withdrawn, but to the amount of seven pints and twelve ounces. On passing the hand into the abdominal cavity the cyst was found to be firmly adherent to the intestine in all directions, the transverse colon being spread out over it. A small opening was now made sufficiently large to admit the forefinger. The cyst wall was very thin, but tough. Externally it was of a dark chocolate colour; the cut edge was rather white, and the interior bile-stained. On introducing the forefinger, after a prolonged search no gall-stone could be found, although, as previously stated, the presence of one could not be doubted. The finger passed upwards and inwards towards the liver into a passage with a crescentic opening, which I believed to be the common bile-duct; but a probe passed down far beyond the finger impinged on no stone. Up to this time I had no doubt but that I was dealing with a huge dilated gall-bladder; but my astonishment may be appreciated when I found, in the course of further investigation as to the relation of the parts outside the cyst, the gall-bladder in its normal position, somewhat pale in colour, undistended by bile, and containing no gall-stones. The question now arose as to what course was the best to pursue. To remove the cyst was impossible. To stitch it to the parietes seemed to condemn the patient to a perpetual fistula, or, at any rate, to very prolonged drainage. I decided, therefore, to accept the other alternative and to attach the cyst to the intestine. Without much trouble I succeeded in drawing up a good coil of jejunum close to the duodenum. My great difficulty was to get a good surface on the cyst. In order to do this I had to tear through the two layers of the mesocolon, and even then the surface obtained was limited. The cyst was then rapidly attached to the bowel by Murphy's button in the manner described by him.[2] The small original opening made to explore the cyst was closed with Lembert's sutures. The peritoneal cavity, which had been thoroughly well packed with sponges, was now cleansed and the pouch to the outer side and beneath the liver drained with a Keith's tube. The wound was closed with silkworm gut sutures. On Oct. 19th the patient had no sickness. She had passed a good night. The temperature was 99·2° F. Flatus was passed by the rectum. About three drachms of bloody fluid were drawn off from the drainage-tube. She was fed per rectum with beef-tea and brandy enemata. On the 20th the temperature in the morning was 100·8°, in the evening 99·8°. Only two drachms of bloody fluid were drawn off from the drainage-tube. Small quantities of peptonised milk were given by the mouth. On the 21st the bowels were freely opened at 8 A.M., the evacuation being stained with bile. The urine was much less highly coloured. On the 23rd the bowels were again opened freely, soft pultaceous evacuations quite natural in colour resulting. The urine was less highly coloured. The jaundiced appearance was much less pronounced. On the 25th the stitches and the drainage-tube were removed. The bowels were open. From this date the record is somewhat monotonous. She was sufficiently well to be removed to her home on Nov. 20th. The jaundice has disappeared, the urine and evacuations being normal. No return of the distension has taken place. She has but one unfavourable symptom, and that is an occasional rise of temperature at night to 101° or 102°. Up to this time (Dec. 10th) the button has not appeared.

[1] THE LANCET, Oct. 20th, 1894.

[2] THE LANCET, Sept. 15th, 1894.

Remarks.—The question that arises is, What was the nature of the case? Up to the time of the operation, and even after it had been commenced and the cyst was opened, there was every reason to believe that it was a gall-bladder enormously distended. But the discovery of the gall-bladder in its normal situation and, if anything, less than its normal size put this idea at once out of the question. That it was a hydatid cyst pressing on the duct could not be entertained, as the fluid drawn off at the first aspiration had been carefully examined and no indications of hydatids had been found. Neither could I find any cancerous tumour of the pancreas or elsewhere which by occlusion of the duct might have produced the symptoms. I believed at the time that I had to deal with a distended duct. I have in vain searched all the records at my command and have found nothing quite resembling this case. In THE LANCET[3] there is the record of a case of distended and sacculated common duct. The duct had ruptured, and the slit was plugged by a movable gall-stone. In the Reports of the Bristol Medico-Chirurgical Society[4] there is a case more resembling the present one. It was that of a child four years of age who had suffered from recurrent attacks of jaundice, and for a year before death with an abdominal tumour in the region of the gall-bladder. Cholecystotomy was performed, and twenty-nine ounces of greenish fluid were removed. The patient died a week after the operation, and at the post-mortem examination it was found that the sac of the tumour was a greatly distended common bile-duct. There is one other explanation. Was it a case of double gall-bladder? That such a condition may exist is demonstrated by the report of a post-mortem examination of a girl aged eleven years in whom a double gall-bladder was found to exist.[5] The non-appearance of the button may be accounted for by its falling back into the large cyst instead of being carried into the intestine. One can hardly think that it can be a source of danger if so situated. It seems to have done its work effectually and established a permanent opening between the cyst and the intestine.

Plymouth.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN EXTREME CASE OF ANGINA LUDOVICI ARISING FROM AN INFLAMED CARIOUS TOOTH; DEATH WHILE UNDER OPERATION.

BY A. E. PREST HUGHES, L.R.C.P. LOND., M.R.C.S. ENG.,

SENIOR RESIDENT MEDICAL OFFICER, UNION INFIRMARY, FIR VALE, SHEFFIELD.

THE patient, aged thirty-one years, was brought to the Union Infirmary, Fir Vale, having for ten days previously complained of frequent attacks of pain due to a decayed tooth. Two days before admission a swelling under the jaw was noticed, which on the following day grew much larger and in the evening had extended to the front of the neck, and had forced his tongue up so much that he could hardly swallow or speak. When I saw him at the hospital lodge he was in a very distressed condition, only able to whi-per and quite unable to swallow, the saliva dribbling from his mouth. The whole of the tissues on the front of the neck were immensely swollen, hard and brawny to the touch, and not pitting on pressure. There was no redness of the skin or signs of pus anywhere. The swelling extended from the angles of the jaw on each side forwards under the chin, and downwards over the front of the neck on to the thorax as far as the upper border of the third costal cartilages. The jaw was immovably fixed and the tongue forced up against the roof of his mouth. His respiration was greatly embarrassed, and the temperature was 103·5° F. He was at once put to bed, and I saw him half an hour later, when he appeared worse than on admission. He was sitting up in bed breathing with much difficulty, and it was evident that he might be suffocated at any moment. Having explained matters to him and obtained his consent to an operation, chloroform was administered on a piece of flannel stretched over a metal frame. He passed under its influence without much struggling, only two drachms being required to render him unconscious. The inhaler was then removed, and I made an incision through the swollen tissues, commencing at the symphysis of the jaw, and carried it down the centre line of the neck as far as the lower border of the larynx. It was necessary to carry the incision to a depth of between an inch and a half and two inches to cut quite through the affected tissues. The parts were quite pale, very hard to cut, and no pus or discharge of any kind came from the wound. While making subsidiary incisions into the swelling on the wall of the thorax the patient's respiration became still more embarrassed, chest movements continuing, but no air entering the lungs, his face became cyanosed and the radial pulse became imperceptible. I at once opened the trachea, the operation being rendered difficult from the swollen state of the parts, and introduced a tube. Artificial respiration was begun, and all the ordinary methods of inducing respiration employed, including the passage of a catheter into the trachea through the wound and the inflation of the lungs through it, together with the injection of ether into the heart muscle, but the patient never made another attempt at breathing, although we persisted for nearly half an hour in our attempts to resuscitate him. Before commencing the operation we had discussed the advisability of performing a preliminary tracheotomy, but decided that incision of the swollen tissues would be sufficient to relieve him. At the inquest the jury returned a verdict of "Death from suffocation while undergoing an operation for cellulitis." No post-mortem examination was allowed.

Fir Vale, Sheffield.

[3] THE LANCET, May 6th, 1882.
[4] Bristol Medico-Chirurgical Journal, Jan. 10th, 1894.
[5] THE LANCET, Dec. 4th, 1886.

TREATMENT OF BURNS.

BY S. GROSE, M.D. ST. AND., F.R.C.S. ENG.,

HON. MEDICAL OFFICER, MELKSHAM COTTAGE HOSPITAL.

LATELY it has fallen to my lot to treat certain severe burns, typical cases frequently met with when the clothes catch fire, in which extensive injuries to the third and fourth degrees are inflicted on the trunk and extremities. Lint soaked in warm carbolised carron oil with a thick envelope of cotton-wool is, perhaps, the best application for the first week; but the nauseous smell of the linseed oil, combined with the fetor of purulent discharge, is horribly offensive and helps to keep up the tendency to diarrhœa common at this period, which is frequently attributed to duodenal ulcer. Let me recommend the following alternative treatment. Dress the vast, beef-red profusely suppurating wounds with gall ointment, thickly spread on strips of lint, or with ointment of galls and opium, or boric ointment having about a drachm of finely powdered galls to the ounce; wrap thickly in cotton-wool and bandage firmly, not loosely. Improvement is rapid, the smell diminishes, and the sufferer finds the treatment comforting. The admirable effect of gall ointment in coagulating albumen and restraining luxuriant granulations would seem to suggest it as a usual dressing in these cases; but none of our authorities mention it, nor have I seen it used excepting by myself. Indeed, the only mention of galls for treatment of burns that can be found in the "ever faithful, ever sure" Neale's Digest is an article written in 1852, claiming that ointment of galls prevents contraction of cicatrix. It is generally recommended that bandages in these cases should be lightly put on. But the fungous granulations are certainly more effectively restrained by firm pressure over elastic cotton-wool; and there can be no question that this treatment is more merciful than the application of nitrate of silver, whilst equally useful.

Melksham, Wilts.

A CASE OF SNAKE-BITE TREATED BY INJECTIONS OF STRYCHNINE; RECOVERY.

BY M. PERCEVAL, L.R.C.P. IREL.

As the value of strychnine in cases of snake-bite is being much discussed at the present time, perhaps the following case may be of sufficient interest to publish in

THE LANCET. On Dec. 18th, 1894, a man was brought a distance of eighteen miles to my house at 4.30 A.M. suffering from snake-bite inflicted four hours previously. He was bitten when asleep, being aroused by the snake "chawing" at his lower lip, and on awakening he found a brown snake 2ft. 6in. long hanging from it, which he pulled off with his arm. On first being seen the patient was pale; the whole surface of the body was bathed in a cold perspiration, the pupils were widely dilated, the pulse was barely perceptible, rapid, irregular, and intermittent, and the breathing of a heavy sighing quality; characteristic marks of a bite were plainly seen on the lip. He was carried from the buggy, being unable to stand, was vomiting, and complained of extreme giddiness and as if about to die. I injected one-tenth of a grain of strychnine, repeating the injection twice at intervals of ten minutes. After the second injection marked improvement was evident in the pulse; after the third injection there was still further improvement of the pulse; the intermittency was gone, the rate was 96, and the breathing easier. He expressed himself as feeling better. Although the giddiness had improved he was not able to stand. I continued injections of one-fifteenth of a grain at intervals of twenty minutes with still greater improvement in the pulse and breathing; there was no further perspiration after the fourth injection. In an hour he was able to walk with support, but complained again of giddiness; the gait became staggering, and the pulse again almost imperceptible. These symptoms improved in a few minutes on his assuming the recumbent position. At the end of another half-hour I was able to admit him to hospital. During the day he only complained of drowsiness. At 6 P.M. he was attacked with vomiting and threw up a pint of fluid of a coffee-ground character. It has been pointed out that persons suffering from snake-bite are liable to hæmorrhage from mucous surfaces, but this is the first appearance of such in my experience, although I have now treated seven cases with strychnine, with recovery. On Dec. 19th and 20th he complained of stiffness of the jaws and nausea. He was discharged on the 24th well.

Isisford Hospital, Queensland, Australia.

PERFORATION OF APPENDIX CÆCI BY A PIN; GENERAL PERITONITIS, ENDING IN SUDDEN DEATH.

BY PTOLEMY A. COLMER, M.R.C.S., L.R.C.P. LOND.,
HON. SURGEON, YEOVIL DISTRICT HOSPITAL AND DISPENSARY.

ON Oct. 3rd, 1894, about 7.45 A.M., I was called to see a boy seven and a half years of age. On my arrival at the house a few minutes after eight I was told the boy had died before the messenger could have reached my house. I examined the body, which was that of a well-nourished and apparently healthy lad, and nothing could be noted with the exception that the abdomen was a little distended. I obtained the following history from the mother. On Sept. 30th he appeared to be poorly, vomiting and complaining of pain in his abdomen, which she put down to be a bilious attack and administered a dose of castor-oil, which was repeated on the following day as the previous dose had taken no effect. On Oct. 2nd, the boy being no better, she went to a druggist, who prescribed a powder (one grain of calomel and six grains of sugar), which was immediately vomited, and in the evening, as this also took no effect, a second powder was given. On the following morning the boy appeared better, and took a cup of tea and milk about 7.30, immediately after which he wanted to have the use of his bowels. He was taken out of bed and placed on a chamber, when he passed a little fluid motion, after which, being replaced in bed (to use the woman's words), he seemed to alter and died in about four minutes. The following morning I made a necropsy on the coroner's order and found the following interesting condition. On opening the abdomen there were signs of recent general peritonitis, which were especially marked around the cæcum; the vermiform appendix was much thickened and enlarged, and presented a perforation through which was projecting a sharp point and within which could be felt a hard body. On opening the appendix after removal I found a body much resembling a date stone and apparently composed of hardened fæcal matter, from one end of which was protruding a sharp point evidently that of a pin. The other organs were natural with the exception of the bases of the lungs, which were congested. I may say there is no history to be got of the boy having swallowed a pin, although there is a history of his having swallowed a shot about last March.

Yeovil.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

VICTORIA HOSPITAL FOR CHILDREN.

ACUTE INTUSSUSCEPTION IN INFANTS.

(Under the care of Mr. T. P. PICK and Mr. H. F. WATERHOUSE.)

THESE cases form a contribution to the series of cases of intussusception to which we recently drew attention in the columns of THE LANCET. The first one is especially interesting, as it adds another to the small list of successes after operation for intussusception in children which Mr. Roughton has tabulated. We have before referred in THE LANCET to two other cases which were successfully subjected to operation and which are not included in the list named, cases under the care of Mr. Barrow and Mr. Berry respectively at the Royal Free Hospital. Mr. Pick in his remarks agrees with our expressions as to the treatment of intussusception, but emphasises the importance of disturbing the parts as little as possible. We fear that in a large number of the cases where patients are submitted to operation the consent of parents is obtained at such a late stage of the illness that adhesions are apt to prevent the surgeon reducing the condition by merely intra-abdominal manipulation, and in other cases the swelling of the intussusception acts as an insuperable obstacle to reduction unless the affected part is manipulated outside the abdomen. This swelling is sometimes present within a few hours after the onset of the intussusception. For the notes of these cases we are indebted to Mr. D. A. Chaning Pearce, house surgeon.

CASE 1.—A healthy, well-nourished infant, one year of age, was admitted into the Victoria Hospital for Children on the evening of Feb. 5th, 1895, under the care of Mr. T. Pickering Pick. The mother stated that for two days the infant had seemed poorly, had vomited three or four times, and had passed motions which were loose, but not frequent. About twenty hours before admission a little blood was noticed in the motion for the first time. Since then there had been no motion, and vomiting had only occurred once. An hour before admission a red mass was found protruding from the anus, but was easily pushed back by the mother. A good deal of blood was passed at the same time. On admission the child was found to be well nourished and not at all collapsed. The abdomen was not distended, and on palpation a distinct tumour could be felt without difficulty, extending along the whole course of the colon. Upon examination per rectum a mass could be felt in the rectum, extending down to the anus, which was quite unmistakable. The child was at once placed under the influence of chloroform, and Mr. Pick proceeded to try reduction by manipulation through the abdominal wall, the pelvis being raised and the mass in the rectum pushed up as far as possible by the finger of an assistant. By this means the intussusception could be felt to be reduced as far as the splenic flexure of the colon, but beyond this reduction could not be accomplished. Inflation of air was next tried, but appeared to produce no result whatever and was therefore quickly abandoned. Warm water was now tried and the bowel filled under considerable pressure until the whole of the colon could be felt distended with the fluid. This was thought at first to have been successful as the mass disappeared from the rectum, but as soon as the water was

allowed to flow away the intussusception returned and could be felt per rectum and through the abdominal wall. It was believed now that nothing short of operative interference would be of any avail, and abdominal section was decided upon; and as the child seemed in spite of all these proceedings to be in a pretty fair state it was decided to proceed with the operation at once. A small incision was made in the middle line of the abdomen, below the umbilicus, of sufficient size to admit the finger and thumb. These digits were introduced into the peritoneal cavity, and the rectum was grasped at its upper part just below the intussusception; by a squeezing movement of the finger and thumb the mass was readily pushed back through the whole length of the colon and speedily reduced. The cæcum was now brought up to the external wound in order to make sure that the ileo-cæcal valve was quite clear; its coats were noticed to be thickened and infiltrated. At no period was any intestine allowed to escape from the abdominal cavity. The wound was sewn up and dressed and the infant sent back to its cot. The whole operation occupied from an hour to an hour and a half. The child was considerably collapsed for some hours, but took food (raw meat juice, with a few drops of brandy) readily and without any vomiting. It passed normal motions during the next twenty-four hours and its recovery was rapid and complete.

CASE 2.—A fat, rickety male infant aged nine months was admitted into the Victoria Hospital for Children on Feb. 11th, 1895, under the care of Mr. H. F. Waterhouse. The child had been given a "cooling powder" the night before and on the morning of admission much blood-stained mucus was found on the napkin. There had been no motion since and vomiting had occurred twice. Upon examination the rectum was found to be occupied by a large intussusception, which could also plainly be felt through the abdominal wall. An anæsthetic was at once given and the colon inflated with air. This was probably successful, as the intussusception disappeared from the rectum and could no longer be felt through the abdominal wall. In order, however, to make matters certain, Mr. Waterhouse filled the bowel with water at a moderate pressure, and as it was found to distend the colon readily as far as the ileo-cæcal valve it was concluded that the intussusception had been reduced. The child was therefore sent back to bed and made an uninterrupted recovery.

Remarks by Mr. PICK.—These two cases, which have occurred quite recently in the Victoria Hospital for Children, appear to me to be worthy of record in connexion with the very interesting case under the care of Mr. Roughton given in the Hospital Mirror of THE LANCET of Feb. 23rd. Mr. Roughton attributes the recovery after laparotomy in his case to the early performance of the operation without previous attempts at inflation or injection. These two cases seem to show—(1) that it is possible to cure some of these cases by simpler means than laparotomy, and (2) that in spite of prolonged attempts at reduction recovery may take place if abdominal section has eventually to be resorted to. With regard to the first point, it must be admitted by all surgeons who have much experience of these cases—and, indeed, Mr. Roughton admits it himself—that many cases of intussusception may be reduced by manipulation, by inflation, and by injection, especially when these remedies are applied early. I could from my own experience give records of several of these cases. Surely, then, it is better to try those measures which hold out a prospect of cure first before resorting to such a very formidable operation as abdominal section in an infant during the first twelve months of life. The amount of shock produced in these little infants is so considerable that the probabilities of a successful issue to a case of laparotomy are very slight, even if the operation is undertaken under the most favourable circumstances and at the earliest possible time, and when no previous attempts at reduction have been made. And even if these attempts have been made and have not been successful, the first case recorded seems to show that a successful result may be obtained. In my opinion a great point in connexion with the operation of abdominal section for intussusception in children is to take every care never to allow any of the intestine to escape from the abdominal wound. If it does there is always difficulty in getting it back, involving damage to the gut in the necessary manipulation. A small opening should be made in the abdominal wall, just sufficiently large to admit the finger and thumb. These should be immediately introduced and the intussusception sought for. When found the gut must be seized below the intussusception, and by a gentle kneading and pushing movement the intussusception can generally readily be reduced without bringing it out of the abdominal cavity.

DERBYSHIRE ROYAL INFIRMARY.

A CASE OF ADVANCED MENINGITIS; CRANIOTOMY; RECOVERY; REMARKS.

(Under the care of Dr. C. A. GREAVES.)

FOR the notes of this case we are indebted to Mr. C. H. Taylor, house surgeon, who remarks that the chief points of interest in the case are, firstly, that the symptoms were all those of tuberculous meningitis, and secondly, that the relief of intracranial pressure caused them all to subside. Whether this case was tuberculous or not, the suggestion naturally occurs, Should any cases of meningitis be allowed to die without the surgeon being called to give relief or to demonstrate that the cause is beyond his skill?

A girl aged thirteen years was admitted into the Derbyshire Royal Infirmary under the care of Dr. Greaves on Oct. 9th, 1894, with a medical man's certificate stating that she was suffering from enteric fever. The family history was doubtful as to tubercle. There had been no previous illnesses. The patient had always been a bright, intelligent girl, but during the previous few weeks had been quiet and subdued and difficult to rouse. She fell twice at school, but did not complain of any injury after the falls. Her parents attributed her "fainting attacks" to over-work. During the last week she had been ill in bed. On admission the patient was thin and emaciated, and her bones were very prominent. There was a hectic flush; the tongue was dry, and she lay with the head retracted, almost comatose. She could only swallow liquids with difficulty. The pupils were dilated, the right not reacting to light. There was double optic neuritis, most marked on the right side. Nothing was to be noted in the chest. The abdomen was retracted; *taches cérébrales* were present; there were no spots. The stools were natural in appearance. The temperature was 100° F.; the pulse 112, small and weak; and the respiration 32. During the next three weeks the notes show a persistently high temperature, 101° to 105·6°, with occasional morning remissions, increasing emaciation and feebleness, increasing difficulty in taking nourishment, and a gradual lapsing into a condition of profound coma. After a consultation with Mr. Curgenven it was decided, with the parents' consent, to open the cranial cavity on the right side to ascertain if the condition could be in any way relieved. On Oct. 30th, after the usual toilet preparations, a triangular flap of skin was dissected up behind the right ear. In doing this the mastoid vein communicating with the lateral sinus was cut across and required plugging, so dilated had it become from backward pressure. A small trephine was applied just above the level of the lateral sinus, exposing the dura mater, and on incising the latter a very large quantity of clear fluid escaped. A finger was then inserted, but beyond ascertaining that the brain had been pushed over towards the middle line nothing abnormal could be made out. The opening was then enlarged in the direction of the mastoid vein in order to better control the bleeding from it, but in doing so the lateral sinus was wounded and required plugging. As the hæmorrhage had been pretty considerable nothing further was done, and the patient was promptly put back to bed. For the next five days the oozing of cerebral fluid though the plugs was considerable, and the temperature still kept up slightly. The plugs were removed on the fifth day, and during the next few days the patient became slightly conscious and took nourishment better. During the next three weeks she gradually regained strength and consciousness, interrupted by three attacks of severe headache accompanied by fever, relieved by passing dressing forceps up through the wound into the cranial cavity, so as to allow some fluid to escape. The wound had healed completely by Dec. 27th. The patient has now (Jan. 1st) regained all her brightness and intelligence, and is physically a picture of health.

SUPERANNUATION ALLOWANCE.—Mr. William Hall, M.R.C.S., lately medical officer for the Tottenham district of the Edmonton Union, has been granted a superannuation allowance of £100 per annum.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Immunisation of Horses.—Adjourned Debate upon the Pathology of Diphtheria.

AN ordinary meeting of this society was held on March 19th, the President, Dr. PAVY, being in the chair.

Mr. W. ROBERTSON read a paper on the Immunisation of Horses. He described the methods employed in the immunisation of horses for the preparation of diphtheria antitoxin, and the process of bleeding the animals when immune. He mentioned that suitable horses of the heavy draught class could be purchased for sums varying from £3 to £7. On purchase the horse is isolated and tested, generally twice, with mallein and then with tuberculin. If satisfactory, the animal is placed with the others. The injections are usually practised in front of the shoulder, due precautions being taken to ensure the sterilisation of the syringe &c. employed and of the skin over the site of puncture. It is seldom that the horse exhibits any uneasiness during the operation. Very small quantities of the toxine are used at first, usually not exceeding 1 c.c. The admixture of Gram's solution of iodine was soon discontinued as it was found to act as an irritant. The local lesion following the first inoculation is as a rule well marked. It presents itself as a diffuse soft swelling slightly painful on pressure, which reaches its greatest size in from six to seven hours, and persists for two or three days. The temperature follows the same course, falling to normal coincidently with the disappearance of the local lesion. When this has taken place the inoculation is repeated, being raised by degrees, if the local and general effects are slight, until in seven weeks the dose has reached 50 c.c. This dose is given three times a week for a fortnight, and if no reaction is produced the dose is raised to 100 c.c. three times a week also for a fortnight, and then 200 c.c. for the same length of time at the same intervals. The period of time allowed to elapse varies in different animals, no inoculations being practised until the local swelling and the temperature have returned to normal. He observed that no two horses are alike in their power of resistance to the action of the toxine, and the disappearance of the local lesion and the fall of the temperature are also very variable. He has never known a horse to refuse its food after inoculation even when the temperature was very high and distinct rigors have occurred. Local necrosis of tissue was noted only four times out of many hundred inoculations. When thought to be sufficiently immune the horse is allowed a clear week's rest before being bled. The jugular vein is sought for, raised by pressure with the fingers, and an incision half an inch in length made through the skin and panniculus carnosus. The cannula is no longer inserted directly into the vein, but having been uncovered it is connected to Kitasato's flask by a piece of quarter-inch rubber tubing, and the cannula is then carefully inserted, avoiding introducing it into the sheath. When the flask is filled it can be replaced by merely pinching the rubber tube. The amount of blood that can be removed varies with the size of the animal, the average quantity being ten litres, though much more has been taken with impunity. The reason for not drawing off more is that if more than ten litres are withdrawn the last four or five litres do not clot properly, and the serum which separates is of a pink colour. The cannula is then withdrawn, pressing on the vein with the finger, and the wound is sponged with a 1 in 20 carbolic acid solution, the edges of the wound being fastened with two catgut sutures, dusted with iodoform and dressed with sterilised cotton-wool dipped in collodion. There has never been any difficulty in stopping the bleeding, and the vein has not once been obliterated. The flasks employed are conical in shape, being the ordinary two-litre and four-litre filtering flasks fitted with a rubber cork and two pieces of glass tubing, one of wide calibre to allow escape of air, the other of narrower dimensions, over the orifice of which is slipped the rubber tubing connected to the cannula. The tubes and flasks are duly sterilised in the steamer. After clotting of the blood the filled flasks are placed in a cool cellar, and in twenty-four hours a large amount of serum will have separated. The branch tube of the flask is then flamed in a spirit lamp, the wool plug removed, and the serum poured off into sterilised Winchesters, the branch tube being replugged. The amount of serum obtainable from the same quantity of blood varies greatly, the average yield being 50 per cent.

Dr. WASHBOURN, continuing the adjourned debate upon the Pathology of Diphtheria, said that Dr. Hunt's observations confirmed those of Roux with reference to the free access of oxygen favouring the production of serum. Dr. Hunt apparently considered the alkalinity of the cultivation to be the essential factor, the oxygen merely preventing the formation of acid; but additional facts were required before this view could be accepted. The rapid decline of toxicity in the cultivations after fourteen days was, he said, an important practical point, and he asked for further details in this respect. In reference to the dying out of the cultivations in nine days under free access of oxygen when methylene blue was used, he suggested that this substance acted deleteriously upon the cultivation in other ways than by simply carrying oxygen. He commented on the statement that a cultivation which yielded a powerful toxine did not necessarily contain bacilli of great virulence, and asked for further explanations. It must be clearly understood that the toxine is a specific proteid poison, but it was not necessarily the proteid which was the poison, but only its disposition and its active and specific quality. He thought that in discussing this matter Dr. Hunt had exceeded the boundaries of pathology. He discussed the alleged non-formation of tetanus antitoxin in fowls, and suggested that Dr. Hunt's failure to obtain a diphtheria antitoxin after injection of toxine was due to the period at which the blood was withdrawn not being suitable. He thought that the excretion of the toxine in the urine when given in large doses might account for the scanty production of antitoxin, and he pointed out that the antitoxic power of the blood was not sensibly diminished after removal of a quantity of blood equal to that contained in the whole body. He asked for further evidence of the view that this was due to a store of toxine present in the various organs. After stating his views in reference to the specific nature of antitoxin, he discussed the difference between infection with the living bacilli and with their toxines, adding that he considered the experiments in this respect somewhat unsatisfactory. He urged that an animal could not be said to be immune simply because it survived an inoculation, real immunity meaning that the animal suffered neither local nor constitutional effects after inoculation. He alluded to the presence of living bacilli in the throat of patients long after the symptoms had subsided, and raised the question whether the bacilli were still secreting toxines, and if so, whether their effects were being annulled *pari passu*. He mentioned in reference to bacterial associations that Dr. Goodall and he himself had failed to discover any relationship between such association and the severity of the case, though the presence of the streptococcus certainly appeared to explain certain complications. The majority of the so-called septic cases of diphtheria were, he thought, due to direct poisoning with diphtheria toxines, and he inclined to the view that the influence of associated streptococci had been much exaggerated. He concluded by stating in reference to the varieties of diphtheria bacilli that the short variety, which rarely produced a fatal effect in guinea-pigs, was the most usual form of the pseudo-diphtheria bacillus.—Dr. G. SIMS WOODHEAD said he had been struck by the differences in the quantity and activity of the poisons produced by the diphtheria bacillus in different broth cultures, even when the same culture was used. He had tried different methods of growing the bacillus to see the conditions in which the toxines were produced. He first used Roux's method, which yielded fairly virulent toxine directly from the membranes, the bacillus being of the long variety. When sown in flasks containing a much larger quantity of fluid kept constantly agitated they found that, although the virulence of the growth was not interfered with, the bacilli still living at the end of a month, the amount of toxine was small. When however, much thinner layers of fluid were used, as in Aronson's method, there was not only an increase in the growth of the organisms, but in the amount of toxine formed. It appeared therefore that there were two distinct sets of conditions: first, an increased supply of oxygen to the bacilli themselves, and, secondly, the action of a considerable quantity of oxygen on the production of the bacilli. If the action of the oxygen could be limited to the bacilli themselves without acting on the toxines they would have the best conditions possible. He pointed out that the poison formation of the bacilli might be quite distinct from their virulence, and it did not follow that if the bacillus did not live very well in the

tissues, that therefore it would not form large quantities of the poison. In regard to the alkalinity of the cultures he pointed out that it was not merely the alkalinity, as was proved by the fact that alkalinity obtained by the addition of soda solution did not give as good results as that resulting by oxygen. There was evidently something special in this alkaline quality. Moreover, keeping the solution alkaline did not increase the capacity of the organism for producing toxines, although they appeared very rapidly after the alkaline stage, or rather after the acid, stage was past. He observed that it was the universal experience that great differences obtained in the resistance of different animals to toxine. He presumed that an animal which withstood the largest amount of toxine must take a longer time to give antitoxin, and that was his experience. He recalled the experiments with tetanus toxine, showing that if the relative immunity of a given animal were overcome by large doses of toxine a much better serum was obtained than was the case from a comparatively susceptible animal, a fact which held good in regard to the immunisation of the horse with diphtheria toxine. This was evidently a much more complicated matter than had at first been suspected. Roux and Viard, although maintaining that the action of the toxine was distinctly through the cells in the production of antitoxin serum, found that this action was very rapid, for by injecting toxine into a small animal, and then taking the blood from the ear, one could obtain a certain amount of antitoxin at once. Either the action must be spread out over a large number of cells or there must be some action directly on the serum. He agreed that it was better to give smaller quantities of toxine at shorter intervals after the first few inoculations, and he was making experiments in that direction. He mentioned that out of fifty post-mortem examinations of diphtheria patients in only five instances had he discovered the diphtheria bacillus in the lungs. In a large number of cases he had found micrococci in the pneumonic patches, and in only four had tracheotomy been performed. He admitted that it was almost impossible from the examination of a few tubes to say what organisms were present in a given case of diphtheria. In about 5 per cent. of the cases the bacillus was not found in the first cultures though present in abundance in the second, or it might be identified in the first culture, absent in the second, and present again in the third. The presumption was that with every care they must have been overlooked. He suggested that by-and-by, when physicians compared the clinical features of their cases with the bacteriological reports, given, for the most part, in ignorance of the nature of the case, much valuable information would be forthcoming. He believed mallein to be absolutely reliable, but he pointed out that it was the progressiveness of the swelling, along with a rise of temperature, that made the diagnosis reliable, not the mere swelling. Post-mortem examination had confirmed the mallein diagnosis in several cases in which glanders was positively denied by the veterinary surgeon. Tuberculin was perhaps not quite so reliable, but if properly used it was also a valuable test. In conclusion he pointed out that the diphtheria bacillus was a far more protean organism than was thought. He had seen wedged shape, pointed, long, short, and divided club shape—in fact, a very large number of forms of this same bacillus. He said the short form was met with most commonly in convalescing patients.—Mr. LENNOX BROWNE showed two specimens of the so-called pseudo-bacillus of diphtheria: the first from a child who recovered under one dose of antitoxin serum; the second from a male patient aged twenty-five, whose symptoms recovered those of lacunar tonsillitis rather than diphtheria, though bacteriological examination revealed the presence of the Klebs-Löffler bacillus of the long variety in an almost pure culture. He made a good recovery without paralysis. Three months later this patient's tonsils were removed, and two days later the wound was seen to be partially covered with patches of pearly-grey exudate, which on removal exposed a freely bleeding surface. A culture from the exudate on blood serum showed sparse colonies of segmental bacilli of the short variety. A subculture showed colonies still more sparse, consisting mainly of cocci; and a further subculture failed to produce any bacilli, the whole growth consisting of cocci. Eleven days later, though the wound had healed, a culture from the surface yielded an almost pure growth of staphylococcus aureus. He remarked that the term "pseudo-bacillus" was a most unfortunate one, for these specimens being typical of what was usually found in similar circumstances proved that they were true bacilli which were undergoing a process of attenuation in development and virulence. He also protested against any importance being attached to the presence of the "Brisou" coccus, this being an organism frequently found in the secretions of the oral and respiratory passages quite irrespectively of diphtheria and absolutely without either diagnostic or prognostic significance.—Mr. BOKENHAM said he had observed that the antitoxin prepared by Klein's method protected the animals inoculated with it against both the diphtheria bacilli and their toxines.—Dr. HUNT, in reply, said he had found that diphtheria cultures cultivated on thin layers of media which had air passed over them were living and well after the lapse of a month. Those bacilli which had been cultivated in a larger bulk of fluid through which air had been bubbled showed much less vitality at the end of a month. This seemed to show that if the bacilli were allowed to take their own air as they required it the products formed were more virulent. He thought there was a great future before the inquiry into the increased natural resistance of animals when they were treated with foreign proteids. He had examined fifty-eight specimens of diphtheritic membrane, and in fifty-six of them the bacillus was virulent; he had never found a pseudo-bacillus. The action of associated streptococci was to increase the virulence of diphtheria bacilli, while when associated with staphylococci cases of diphtheria ran a milder course.—Mr. W. ROBERTSON, in reply, said that mallein was very reliable as a test for glanders: if it gave a positive result it was certain that the animal had glanders; if it gave a negative result it was not so certain that the animal had not glanders. He had had no personal experience of the use of tuberculin in tuberculosis of horses, but in cattle, if tuberculin was properly used, the test was a reliable one.

OPHTHALMOLOGICAL SOCIETY.

Double Optic Atrophy with Peculiar Visual Fields.—Filaria Loa.—Traumatic Cataract with a Foreign Body embedded in the Lens.—A Form of Iritis not usually recognised.—Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on March 14th, the President, Dr. ARGYLL ROBERTSON, F.R.S.E., being in the chair.

Dr. GEORGE OGILVIE read notes of a case of Double Optic Atrophy with Peculiar Visual Fields. The patient was a man aged fifty-seven, who was a sorter of cigars and a moderate smoker. His vision failed in December, 1893. He had formerly had epileptic fits and came of a family with a very neurotic history. The movements of the eyes were normal; the pupils acted sluggishly to light. In October, 1894, the vision of the right eye was $\frac{6}{18}$, and of the left fingers at ten feet, with eccentric fixation. Mixed astigmatism was present in both eyes. He had floating opacities in the vitreous. Both optic discs were pale, and the retinal veins were tortuous; there was a congenital crescent in both eyes. The right visual field was contracted for white and colours. There was contraction of the left visual field and complete inferior hemianopia. There was neither sugar nor albumen in the urine; and no history of syphilis or alcohol. His knee-jerks were exaggerated; some ankle clonus was present. The character of the visual fields pointed to change in the optic nerve itself; it was a question if it were a primary atrophy or the result of a neuritis. From an old Moorfields Hospital letter in his possession it was found that he had attended there for optic neuritis. In February, 1895, the upper and inner quadrant of his right visual field was missing, giving an appearance of right lateral hemianopia.—Dr. JAMES TAYLOR referred to the history of past optic neuritis as being a sufficient explanation of the changes observed in the fundus. He thought it was unnecessary to assume any lesion in the occipital lobes, but he asked whether the vitreous opacities present in this case were not pathognomonic of syphilis.—Dr. A. BRONNER asked if there were any possibility of the existence of lead poisoning.

The PRESIDENT communicated further notes of a case of Filaria Loa which he had brought before the society in October last. After removal of the parasite the patient was not troubled again for six weeks; on Feb. 6th the worm was felt and seen again, and was sought for in vain. Two days later a swelling appeared in the right temporal region. On Feb. 13th the worm was felt beneath the right upper eyelid;

it wriggled across and then remained coiled up there. An incision was made, and after some dissection a fine filamentous body, smaller than the ordinary filaria, was found; this was identified later as part of the expressed oviduct; a well-formed filaria was found deeper in the tissues, with its oviduct protruding. The blood had been examined many times in the last six months, but no traces of the filaria or its embryos could be found. The patient had occasional swellings of the skin of the arm, such as often occurred among residents in Old Calabar. As to the origin of the worms in this case, although the patient had been careful about her drinking water, for ten days before leaving Old Calabar she had been too ill to purify the water, and she might have become infected by impure water then.

Dr. W. SPENCER WATSON described a case of Traumatic Cataract with a Foreign Body embedded in the Lens. The patient, a man aged twenty-nine, had several injuries of the right eye, but only accidentally discovered that the sight was affected some time after the more serious injury. He was not aware that a foreign body had entered his eye. The foreign body was seen, however, in the cataract, which was dealt with first by discission, and subsequently by linear extraction, the foreign body being removed at the second of these operations. Everything went smoothly, and when the patient was seen a year later there was a normal-looking pupil, and vision remained good. Mr. Watson pointed out that the time for extraction when a foreign body was present required very careful regulation, the gradual softening of the lens being watched until it became of a gruelly consistence, and the operation performed before it had become fluid.—Dr. DRAKE BROCKMAN referred to the case of a Hindoo target-keeper who received a splinter of lead from a bullet in the left eye. There was a wound of the cornea, the lens was opaque, and embedded in it was a small piece of lead, fixing down the iris and projecting into the anterior chamber. The portion of iris transfixed was removed with the lens, and the eye recovered good vision with the aid of a convex glass.—Mr. MARSHALL related a somewhat similar case.—In reply to Mr. JOHNSON TAYLOR, Mr. SPENCER WATSON said the exact nature of the foreign body was not ascertained.

Mr. W. A. BRAILEY described a peculiar Form of Iritis not usually recognised. After a summary of cases he arrived at the following conclusions:—That a late iritis sometimes follows an acquired syphilis, and that the average time of its attack does not vary much from thirteen years from the primary sore. That such iritis is generally double-sided and its usual form an iritis serosa—that is to say, an iritis, or rather an irido-cyclitis, with comparatively little tendency to the formation of posterior synechiæ, and accompanied by dots on the posterior corneal surfaces and also by a tendency to secondary glaucoma. That the patient may show other late manifestations of syphilis, as in the cases shown, of which one has ozæna and the other choroiditis disseminata. That a similar late iritis may follow an inherited syphilis, and that the average age of the subject of it, though varying within wide limits, approximates to twenty-one. That in inherited, as in acquired, syphilis the usual form is a double serous iritis. The iritis may, however, be of a much severer type, with varying tension and with the occlusion of the pupillary area with a layer of lymph, such lymph being, however, comparatively free from the iris at the pupillary edge. That such an iritis may also be accompanied by larger and more cloudy dots on the posterior surface of or perhaps deep in the cornea, such deposits with the others resulting in the formation of a dense non-vascularising triangular plaque deep in or behind the lower part of the cornea. That the iritis may more rarely be of a different type, either the gummatous with occasionally peripheral anterior synechiæ, or the adhesive, leading even to occlusion of the pupil and consequent secondary glaucoma. That apart from the iritis which simply attends and is quite secondary in degree to severe interstitial keratitis, the late serous iritis of inherited syphilis may show a close relation to interstitial keratitis. Thus a slight interstitial keratitis may be followed after a distinct interval by a gummatous iritis, while the iritis with blocked pupil, deep triangular corneal plaque, and varying tension may be accompanied by fine filmy or denser and more widely spread opacities in other parts of the cornea. Notched teeth are rare, or perhaps even uniformly wanting, in the pure iritis serosa of late inherited syphilis, while they are present in increasing frequency as the disease approximates in its associated characters to interstitial keratitis. It is very noticeable that the subjects of the late serous iritis of inherited syphilis are often of extremely good physical development.—Mr. HIGGENS was of opinion that one of Mr. Brailey's cases appeared very like an old case of interstitial keratitis, and inquired whether such an intercurrent attack could have occurred.—Mr. SPENCER WATSON wished Mr. Brailey to point out the novel features in these cases; they had been familiar to him, and he believed they were generally recognised.—Mr. JESSOP referred to the presence of punctate dots on the anterior surface of the iris in one of the patients, which resembled those present in a case he had recently brought before the society.—Mr. LANG said that in one case there existed a ring synechia between the periphery of the iris and the cornea, which must impede filtration; others presented isolated anterior synechiæ.—Dr. HERN inquired whether the iritis was primary or an extension from keratitis.—Mr. BRAILEY said the iritis was independent of keratitis. The boy to whom Mr. Higgens referred had been continuously under observation, and the white plaque present had been seen to develop from a keratitis punctata, and not from interstitial keratitis.

The following cases and card specimens were shown:—

Dr. SYDNEY STEPHENSON: An Improved Test Type.

Dr. A. BRONNER: Wire Eye Shields for use after Cataract Operations.

Messrs. HARTRIDGE and GRIFFITH: Cholesterine in Subretinal Fluid of a Detached Retina in the Eye of a child removed for Buphthalmos.

Mr. HARTRIDGE: Cholesterine in the Anterior Chamber.

Mr. C. DEVEREUX MARSHALL: Microscopical Sections of (1) an Unusual Syphilitic Growth, and (2) Tuberculous Growth.

Mr. JESSOP: Primary Sore on Upper and Lower Lid.

Mr. VERNON: Case of Pulsating Tumour of Orbit.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Dangers of Morphia in Gynæcological Practice.—Leakage of an Ovarian Cyst in a girl aged thirteen.

A MEETING of this society was held on March 14th, Dr. CLEMENT GODSON, President, being in the chair.

Mr. F. BOWREMAN JESSETT showed a specimen representing a Cast of the Entire Uterus, which he had removed by packing the cavity of the uterus with chloride of zinc paste. The patient, aged forty-eight, had had an offensive discharge with pain and loss of flesh for seven months. The uterus was found fixed; the cervix was the seat of advanced ulcerated epithelioma. After scraping away as much of the growth as possible with the dredger, the paste was packed into the cavity of the uterus in the way previously described. Three weeks later the whole uterus came away as a slough. For a time there was a vesico-vaginal fistula. Four months after the operation there was no trace of malignant disease.—The PRESIDENT had seen many cases of this kind formerly at St. Bartholomew's Hospital, when they were regarded as hopeless and beyond relief.—Dr. PURCELL remarked that the surrounding structures in these cases escaped injury in a way one would not expect. He had not been able to tell in his own cases whether the peritoneal covering came away with the rest. The patients had, so far, done well.—Dr. ROUTH said he had used not only the chloride of zinc, but also strong nitric acid, the acid nitrate of mercury, and bromine. From the last, in a 20 per cent. solution, he had had very good results.—Mr. JESSETT replied. He said the pathologist had carefully examined the specimen to find the peritoneum, but thought it was not possible to state whether it was present or not. Twenty cases had been done at the hospital, happily without fatality, so no post-mortem examination had been made. He then gave some further details of the operation and promised to bring the later results before the society.

Dr. MACNAUGHTON JONES read the following paper upon the Dangers of Morphia in Gynæcological Practice. He said: "I propose to consider the question of morphia administration in women from the following points of view: the influence of temperament on its action and effects; our knowledge of its physiological and psychical influences; and the precautions to be observed in its exhibition. With regard to temperament, I must ask your attention for a few minutes to that large class of sufferers from affections of the female generative organs commonly spoken of as 'nervous.'

The neurotic woman, I take it, is to be regarded in the light of a by-product of that unstable nervous organisation which we style the 'nervous temperament.' Such a temperament is frequently satisfied with little sleep. Under the influence of excitement fatigue is quickly recovered from, and a latent reserve force of energy appears ever ready on demand to carry its possessor over insurmountable obstacles. All this accumulated governmental control of will and nerve energy are missing in the neurotic, but none the less is that loss felt when the unequal struggle occurs between the sovereignty of an enfeebled, indeterminate will and the rebellious and more masterful emissaries—the woman's 'lower passions and lower pains.' While in health such individuals can pass through great physical and mental exertion without stimulants, but when the natural call on their reserve energy finds no response they apply the artificial spur of alcohol or some other excitant, such as morphia, to the flagging nerve cells. Such women are quite cognisant of the abeyance of the power to exercise free will. The desire to suppress the expression of pain is present, but the usual control is lost. Also, there is general hyperæsthesia of the peripheral nerves, which find in the frequently ill-nourished central cells a susceptibility to slight impulses and morbid sensitiveness with an exaggerated perception of any comparatively trifling stimulation. Here we are dealing with an *acquired* neurosis, for which possibly we may find no clue through atavistic transmission. On the other hand, we can frequently see in early childhood the traits of temperament which clearly foretell the future neurotic woman. Capriciousness, irritability, selfishness, restlessness, and excitability are the characteristics which stamp the moral prototype in the child of the adult neurasthenic and hysterical woman, though it is after puberty that we frequently find such distinctive features of character develop themselves. When a woman of this type marries, in the demands on her nervous system, if she be not sterile, which the claims of children and domestic duties involve her in, she generally escapes those neurotic and hysterical manifestations that are found in the unmarried and sterile. In the single woman of the 'neurotic' type we are more likely to meet with those erotic thoughts, desires, and practices that still further enervate her nervous system and enfeeble her central control. She is perhaps most of all the back drawing-room or boudoir woman who is apt to fall, to use Professor Clifford Allbutt's expression, 'into the net of the gynæcologist.' Turn we now for a moment to the *lymphatic* antithesis of this unfortunate victim to unbridled and morbid nervous and sexual impulses. There is a type of woman familiar to us all—indolent, lethargic, fanciful of ailments, with a superficiality bordering on childishness in conversation, dull of comprehension, readily open to flattery, even to her own self a bore, and often one to her husband and children if she be married. She is often found fringed with layers of pectoral and abdominal fat, the easy prey to quack systems of dieting and to the 'man of the world' physician. Her defective metabolism, added to a sexual voluptuousness, makes this proprietary article the registered dual property of the 'pure specialist' for gout, on the one hand, and the cotton-wool gynæcologist, on the other. She is one of the principal sources of revenue to the new *franc-tireurs* of the outposts of medicine—the ubiquitous masseurs or masseuses. With her every twinge is 'agonising,' to walk is impossible, and once let her evolve 'uterus and ovary' on the brain, and whether these organs be diseased or not they are made responsible for every ill her peccant flesh is heir to, not even excluding 'housemaid's knee.' She is not of the classical neurotic type previously described, though her visceral neuroses may in time come to be legion. She may suffer from congestive dysmenorrhœa and ovaralgia, her uterus may be as flabby as her brain, and her ovary be as fertile in aches as her imagination is in fanciful illusions. Her voluptuosity is not limited to her appetites of palate, and it is not infrequently manifested in various sexual abuses. She fancies she sleeps for many hours less than she actually does, and hence is often seeking for some new, when she has already exhausted every conceivable variety of reputed, hypnotic. While we find in the unmarried more frequently examples of the first type of temperament, married women furnish a larger proportion of the latter. Both, however, are to be found constantly as representatives of the habit of morphinism. Let us consider now the facts which are fully established regarding the etiology and course of morphinism, leading up to morphinomania. It is a curious fact that not until 1864, when Nusbaum[1] drew attention to the consequences following the abuse of injections of morphia, was there any serious notice taken of its ill-effects. The first English physician who seems to have written on the subject was Professor Clifford Allbutt, who drew attention in the *Practitioner* of 1870 to the dangers following incessant injections of morphia. [Dr. Macnaughton Jones here gave an exhaustive bibliography of morphinism.] It is important to note that so far as statistics appear to prove men are more subject than women to the morphia craving. Also the prevalence of morphinomania amongst medical men, nurses, and pharmacists has to be remembered, medical men representing by far the largest number of all classes in which the craving has been recorded. Out of 150 morphinomaniacs noted by Lewinstein and Burkart 86 were either medical men or persons connected with the medical profession. Rochard considers that medical practitioners furnish more than half the number of male sufferers. Some of the most inveterate morphinists I have known have been medical men. One committed deliberate suicide by throwing himself from a window. This unfortunate prevalence of the propensity in the ranks of medicine may be accounted for, says Regnier, first, by the facility with which the drug is procured, and secondly by the arduous nature of a calling which oftentimes makes irresistible demands on a frame already over-fatigued and suffering. So far as the influence of age is concerned, it would appear that the majority of morphinomaniacs will be found between the ages of twenty-one and fifty. [Dr. Macnaughton Jones then described graphically the downward course of the morphinomaniac.] What touches us here more especially is the influence exerted on the catamenial function through the morphia habit—namely, frequent arrest of the catamenia and constant irregularity or complete suppression. Sterility is at times the consequence of this arrest of uterine function. There is also to be remembered the undoubted effect of morphia on the embryo, and the fact that the infants of morphia-takers suffer immediately after birth from the consequences of the habit has to be recollected. But the fact before all others that I am anxious to emphasise, which has been clearly proved by a number of observers, is that what we understand by hysteria occupies the foremost place in the causation of morphinomania. Hysteria, neurasthenia, neuralgia, and cephalalgia are the correlated conditions often associated with sexual disturbances which stand in the forefront in the etiology of morphia abuse in women. And they are, unfortunately, the very conditions for which it is most frequently prescribed. Recall now the temperaments that I have endeavoured to depict as types of those most susceptible to the deleterious effects of morphia. They are distinctly those which all experience has proved are most likely to be conquered by the physiological action of the drug. Such persons are always importunate for its employment once they have experienced its effects, and the weak-kneed physician is compelled to yield to their importunity. A prescription is given, possibly a nurse is entrusted with the administration, and very frequently, when the nurse leaves, the patient retaining the prescription, not alone administers, but practically prescribes the medicament for herself. I have known a supply of a morphia solution of the British Pharmacopœia obtained daily at different druggists, and thus as much as eighteen or twenty grains of morphia have been taken subcutaneously within the twenty-four hours. The original prescription was copied at different establishments, and no demur was made to compounding it even after the lapse of two years from the date of the original prescription, nor was the physician who prescribed it made cognisant of the fact that it was so repeated. I cannot but look upon such a practice as a grave and dangerous abuse of that mutual trust which should exist between the physician and the pharmacist. When morphia can be readily obtained in large quantities the tendency often arises for one woman to recommend its use to another and even to go so far as to subcutaneously inject it into her friends. Thus the habit becomes contagious, and there is even a morbid delight felt in the act of puncturing, not alone herself, but others (Regnier). One other point I will only make a passing allusion to, and that is the double-edged nature of this weapon, when used

[1] Die Gefahren der subcutanen Injectionen. Bairisches Aerztliches Intelligenz Blatt.

by the surgeon after abdominal operations, in masking symptoms of peritonitis and possible interference with the natural process of cure through arrest of the secretions. As Greig Smith well says: 'The routine employment of morphia is to be condemned. Complications are better met with a system unimpregnated with morphia.' The moral of this paper is that there is a responsibility attached to the employment of morphia for the relief of pain in the affections of women not sufficiently recognised in practice. This responsibility imposes on the physician the duty of differentiating those cases in which morphia may almost be given with immunity from its toxic effects from those in which the risk of the intoxication by its repeated use is great. It is not too much to say that under no circumstances whatever should a patient be permitted to inject it herself, and it is questionable for many reasons whether relatives or friends, save under very exceptional circumstances, should accept the responsibility of doing so."—Dr. DUDLEY BUXTON thought Dr. Macnaughton Jones had done well to bring this subject before the society and thus emphasise the therapeutic as distinguished from the operative side of gynæcology. He had seen much of the bad effects of indiscriminate prescribing of morphia, and thought additional safeguards were required. He went further than the lecturer, and was of opinion that no druggist should dispense any poison a second time from one prescription unless initialed each time by the prescriber; nor should a medical man delegate to any other hands the hypodermic administration of such a potent drug as morphia.—Dr. CHAPMAN GRIGG said that in many cases large doses of morphia answered no better than small ones in relieving pain.—Mr. WALKER SMYTH, Dr. BENNETT, and Mr. JESSETT having spoken, the discussion was adjourned to the following meeting.

Dr. WALTER (Manchester) gave particulars of an abdominal enlargement in a girl aged thirteen which had been noticed for six months. The girl had rapidly lost flesh. The physical signs were those of ascites, and in the region of the umbilicus some hard nodular masses could be distinctly felt. There was no history of any sudden pain or change in the contour of the swelling. The diagnosis arrived at by all who had seen the patient was either tuberculous peritonitis or malignant disease of the abdomen with ascites. An exploratory incision proved that the fluid in the peritoneal cavity was entirely ovarian, and the masses referred to consisted of a multilocular cystoma of the left ovary. On its upper surface a round aperture a quarter of an inch in diameter was found, and through this opening fluid similar to that in the abdomen was seen to escape. The cystoma weighed 4 lb. 4 oz. and the fluid weighed 9 lb. 6 oz. The girl made a rapid recovery.—The PRESIDENT thought Dr. Walter could not be said to have made any serious error in coming to the conclusion which he arrived at in view of the facts before him.—Dr. BANTOCK said it was not quite correct to speak of a case of this kind as "rupture," though this result might occur after a fall. Multilocular ovarian tumours were very prone to a colloid degeneration, owing to which a small hole gradually extending often occurred in the wall. By the formation of such a hole in a septum the loculi were thrown into one. He had pointed out some time ago that this was the mode of origin of unilocular ovarian tumours.—Dr. MACNAUGHTON JONES believed that a true rupture, apart from degeneration, could occur spontaneously; he had seen two cases.—Mr. JESSETT gave an account of an unusual case which he hoped to bring before the society in which a cyst ruptured, and the abdomen was found full of small free cysts. The case proved fatal.—Dr. WALTER briefly replied.

HARVEIAN SOCIETY OF LONDON.

The Dorsal Auscultation of Heart Sounds and Murmurs.

A MEETING of this society was held on March 7th, the Vice-President, Dr. J. E. SQUIRE, being in the chair.

Dr. WM. EWART read a paper on the Dorsal Auscultation of Heart Sounds and Murmurs. He dealt with the subject in great detail and corroborated the observations of Walshe. In particular he drew attention to the desirability of taking a fresh view of the subject of dorsal auscultation of the heart; for, though it probably had been studied by various observers, their results had not been published, and apparently no later account was available than that by Walshe. The statements of that great authority deserved to be tested and confirmed by fresh observations; and although much immediate practical advantage could not be expected of the inquiry it would be satisfactory to feel sure that we possessed all the facts with which auscultation could provide us at the present time. A study of the conduction of the normal heart sounds must necessarily precede any study of the murmurs, but the method to be followed was the same in both cases, and implied a previous inquiry into the topography of the heart in connexion with the back, and into the intrathoracic anatomical relations which might favour or impede the conduction of sound vibration. An auricular and a left aortic auscultatory site suggested themselves in this way as it were, *a priori*, as anatomical sites; but other auscultatory sites were situated at a distance from the heart, and their recognition had been purely empirical. To these belongs the site at the lower angle of the left scapula, where auscultation was constantly being practised. For the auscultation both of heart sounds and of murmurs the rigid stethoscope was to be recommended. In the investigation valuable assistance had been received from Mr. Bertram Cooper, Mr. Scott Elliott, Dr. Sidney Ransome, and from Dr. Eric France, who, in a series of thirty children, had tabulated the results of his own auscultation of the heart sounds at the various sites. The paper dwelt in detail on the audibility of sounds and murmurs at the several auscultatory sites; the main results closely agreed with those which had been published by Walshe. Attention was drawn to the conduction of heart sounds and murmurs at the right base, apparently along the upper surface of the liver, a subject upon which further observations might probably throw interesting light. Meanwhile, the area at the left scapular angle still retained its prominent position among the dorsal auscultatory sites as supplying us with the most definite practical conclusions in connexion with the differential diagnosis of some of the cardiac murmurs.

Dr. SQUIRE thanked Dr. Ewart for bringing before the society a paper on so interesting a subject. He asked whether the patient in whom the cardiac impulse was observed in the back had a cavity in the lung. According to his (Dr. Squire's) observation an impulse synchronous with the heart's beat might be seen or felt in almost any part of the left chest—front or back—in cases of pulmonary cavities. The conduction of cardiac sounds to the back was often of more value in indicating the condition of the lung than in reference to the heart itself, though murmurs originating on the left side were most likely to be conducted backwards because of the position in which the heart lies. He had recently a case under his care in which a mitral presystolic murmur was plainly audible in the back. In connexion with murmurs heard in the back, he drew attention to the "whiffing" sound produced in the air tubes, which is systolic in point of time and might easily be mistaken for a true cardiac murmur. It is well heard just below the angle of the left scapula and is most distinct during inspiration. Though caused by the beating of the heart it is a pulmonary and not a cardiac sound.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary (pathological) meeting of this society was held on March 13th at the London Institution, Mr. CHARTERS J. SYMONDS, President, being in the chair.

Messrs. William T. Partridge, Thos. Rushbrook, and E. B. Landon were unanimously elected Fellows of the society.

Mr. OPENSHAW showed a Congenital Sacral Tumour (and the child from whom it had been removed) presenting microscopically epithelial and striped muscle tissue. He also showed specimens of Sarcomatous and Cystic Tumours removed from the same region.—The President, Mr. Hallidie, and Sir Hugh Beevor made remarks.

Dr. FRED. J. SMITH showed the Cranial Vault and Brain of a woman exhibiting the growth of a large Sarcomatous Tumour which, starting from the brain, had perforated the dura mater and bone by several small processes and then formed a swelling as large as a fœtal head beneath the scalp. The duration of the case had been less than a year from beginning to end, and yet the tumour showed considerable caseation (the microscope left no doubt as to its sarcomatous nature).—The case was discussed by the

President, Mr. Openshaw, Mr. Hallidie, Dr. Rutter, Dr. J. H. Sequeira, Dr. Turner, and Sir Hugh Beevor.

Specimens of Gall-stones causing obstruction which ultimately proved fatal were then shown by the President, Mr. OPENSHAW, and Dr. H. FOX.—The cases were discussed by Mr. Cotman, Sir Hugh Beevor, and Mr. Humphreys.

Mr. HOPE GRANT showed a specimen of Scirrhous Carcinoma, causing œsophageal stricture just above the stomach.

Mr. OPENSHAW showed a specimen of Cystic Sarcoma of the Kidney which had been hardened in formal. The specimen had been removed from a child aged three.—Sir Hugh Beevor and the President discussed the case.

The PRESIDENT showed specimens of Carcinoma of the Stomach and Liver taken from the body of a patient whom he had previously exhibited to the society as an illustration of the excellent result he had obtained by his method of performing gastro-jejunostomy; the patient lived in comparative comfort for over ten months after the operation had been performed.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Two Cases of Extradural Pressure on Spinal Cord.—Foreign Body in the Bronchus.

THE sixth meeting of the session was held on March 13th. The President in feeling terms spoke of the loss the society had sustained in the death of a past president, Dr. James G. Davey.

Dr. CHRISTIE showed a patient with Asymmetrical Development of the Cranium and Lower Jaw, with spinal symptoms; and another patient with Peripheral Neuritis, showing tropho-neurotic changes.—Drs. Firth and Clarke discussed the cases.

Mr. GREIG SMITH exhibited—(1) a large Sarcoma of the Breast; (2) Hydronephrotic Kidney, due, he considered, to pressure on the ureter, from a woman with extreme prolapse of the uterus; (3) Subphrenic Abscess Cavity, caused by a perforating ulcer in the stomach; (4) Malignant Stricture at the Ileo-cæcal Valve; (5) Gall-stones from two recent operation cases; and (6) a small Calculus from the female bladder.

Dr. HARRISON exhibited a specimen of Necrosis of the Lower Jaw in a Polar Bear; and Fracture of the Base of the Skull in a Brahmin Bull.—Dr. J. G. Swayne and Mr. Ewens commented on the specimens.

Dr. MICHELL CLARKE read a paper, illustrated with numerous diagrams and specimens, on two cases of Extradural Pressure on the Spinal Cord (*a*) from inflammatory swelling in a case which presented symptoms of syringomyelia, and (*b*) from a localised tuberculous mass in caries.—Mr. BARCLAY described the operation he had performed in the former case, mentioning the great difficulty he experienced in stopping the excessive hæmorrhage.

Mr. PAUL BUSH read a paper on a case of Foreign Body in the Bronchus of a child aged eight years, and exhibited a steel hat-pin over three inches in length which had been expelled through the mouth three months after tracheotomy had been performed.—Dr. Fisher commented on the absence of lung symptoms, and Mr. Morton, Dr. Rogers, Dr. Newnham, Dr. Harrison, Mr. Barclay, Dr. Michell Clarke, Dr. Christie, and Dr. Firth considered various points in connexion with the paper.

LIVERPOOL MEDICAL INSTITUTION.

Cases of Laryngeal Paralysis.—Renal Calculus.—Supra-pubic Cystotomy for Vesical Hæmorrhage.—Death Certification and the Recommendations of the Select Committee of the House of Commons.

A MEETING of this society was held on March 14th, Mr. CHAUNCY PUZEY, President, being in the chair.

Dr. PERMEWAN described two cases of Bilateral Laryngeal Paralysis. The first had a history of dysphagia combined with attacks of spasmodic dyspnœa. At first no œsophageal stricture could be detected, but even then there was complete bilateral abductor paralysis of the cords. Organic disease affecting both recurrent laryngeal nerves was diagnosed, and the patient eventually died from starvation. At the post-mortem examination a cancerous mass was found surrounding both recurrent laryngeal nerves. The second case was one of bulbar paralysis, in which Dr. Permewan was able to watch the onset and progress of the laryngeal affection. The paralysis started with the abductors, and it was only after nine months that the adductors became affected. This, he observed, is only what might be expected from our general knowledge of laryngeal paralysis, but is in contradiction to the teaching of authorities on nervous diseases.

Mr. LARKIN read notes of a case of Renal Calculus in a woman where the symptoms closely resembled those of fissure of the anus. There were no symptoms referable to the kidney except a trace of pus in the urine, but, under chloroform, a slight enlargement of the right kidney was detected by palpation. The patient was relieved of all pain by removal of the calculi from the kidney.—The President, Dr. Carter, and Dr. Davies made remarks on this case.

Mr. GEORGE HAMILTON read a note on a case of Vesical Hæmorrhage for which supra-pubic cystotomy had been performed. He also showed a new apparatus for drainage.

Mr. F. W. LOWNDES read a paper on Death Certification and the Recommendations of the Select Committee of the House of Commons. After alluding to the heartburnings which this unremunerated duty had caused, both to the public and the profession, Mr. Lowndes quoted from a speech of Dr. Farquharson, M.P., and read a letter from Sir Walter Foster, M.P., in which both gentlemen expressed their sense of the importance of the subject, and of the value of any resolution which might be adopted by the members of representative and scientific bodies. Mr. Lowndes then went through the recommendations of the Select Committee *seriatim* and dwelt upon the importance of caution in giving death certificates, adducing instances which showed that carelessness in this respect facilitated wholesale poisoning; while, conversely, a little extra care might save life. He also urged that greater care should be shown by coroners in their informal inquiries, and that they should have power to remunerate medical practitioners in cases where they did not hold inquests.—Dr. HOPE drew attention to the importance of discriminating between mischief arising from defects in the law regulating registration and from evasion of the existing law. In Neal's case the medical man, registrar, and witness all seemed to have failed to comply with existing requirements. Dr. Hope considered that a fee should be payable by the governing body in respect to every death certified; this would conduce to greater accuracy, which was greatly needed. In the event of public medical certifiers being appointed, he did not think that the medical officer of health should be that officer, but an independent coroner's assessor might discharge such functions.—Mr. Puzey, Dr. Carter, Dr. Whitford, Dr. Imlach, Dr. Permewan, and Dr. Davies also took part in the discussion which followed the reading of Mr. Lowndes' paper.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Traumatic Aneurysm of Aberrant Right Subclavian Artery.—A New Method of dividing Bone in Surgical Operations.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 28th, Mr. SIMEON SNELL being in the chair.

Mr. PYE-SMITH showed a Breast removed that day from a woman aged ninety-one. It contained a growth which appeared to the naked eye to be a sarcoma. This had grown recently at the site of a small lump which had been present, it was believed, for sixty years, having followed an injury.

Dr. BLACK MILNE showed an almost perfect example of Congenital Asymmetry in a female child aged nineteen months. Full details and measurements were given. The patient was the first child of young parents who presented no anomalies in themselves, nor were any recorded in the case of their relatives. The right side was the larger, and the inequality was shown in the head, face, trunk, limbs, and in the following structures—viz., alæ nasi, palate, tongue, tonsil, and labium. On the right side the palpebral fissure was wider and the globe looked larger. There was cutaneous congestion on both sides, but more marked on the right. No varices or nævi were present. On the two sides the arteries appeared to be equal and there was no difference in the temperature. Six teeth were present on the right side and one on the left. Reasons were given for thinking that

there was deficiency of growth of the left half of the body as well as over-development of the right.

Mr. PYE-SMITH read notes of a fatal case of Traumatic Aneurysm of Aberrant Right Subclavian Artery. A man aged thirty years had fallen on his back from the top of a house. He had dyspnœa with signs of obstruction to the left bronchus, dysphagia, and absence of right radial pulse. After temporary improvement the dyspnœa and dysphagia increased, and the right carotid pulse disappeared. On the eighteenth day impending suffocation was relieved by tracheotomy and a long tracheal tube, but vomiting of blood occurred on the next day and he died the day following. At the necropsy a traumatic aneurysm was found in the posterior mediastinum on the aberrant right subclavian artery. This had caused pressure on the left bronchus, and later on the œsophagus, trachea, and right carotid artery. Finally, it had ulcerated into the œsophagus.

Dr. MORTON read a paper entitled "A New Method of Dividing Bone in Surgical Operations." The novelty he suggested was shown in an instrument with two opposing blades similar to bone pliers, but having a deeply indented cutting edge, the teeth being spear-pointed and sharp on either side. The lever handle, actuated by a strong closing screw, approximated the blades until the bone was divided. The dentated edge was applicable to chisels. Various sizes of them were exhibited. Sundry bones were experimented on with good results, the cut surfaces having a fairly even aspect throughout.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Frozen Sections and the Mechanism of Labour.—Some Measurements of the Uterus.—Walcher's Position.

A MEETING of this society was held on March 13th, Dr. A. H. FREELAND BARBOUR, President, being in the chair.

Dr. JAMES RITCHIE showed a Dimidiate Placenta; also an American Pessary for Prolapsus Uteri, a modification of the cup pessary, with telescopic stem attached to a pelvic band.

Dr. BALLANTYNE exhibited an Anencephalous Fœtus with Spina Bifida, to which amniotic bands were attached. The right thumb was poorly developed. This fœtus was female, and the fourth child of the mother. The previous child was also female, but was hydrocephalic and with absence of the right thumb. The first and second children were healthy males.

The PRESIDENT continued his paper on a Study of the More Recent Frozen Sections in their Bearing on the Mechanism of Labour and the Third Stage. As regards the engagement of the head, the received view is that the head is synclytic, the horizontal planes of the head coinciding with the horizontal planes of the pelvis, but in no frozen section is the head synclytic. In most there is more of the posterior half of the head below the plane of the brim as the head engages than of the anterior. (Saëxingis's and Barbour's sections show rather more of the anterior.) Pinard and Varnier advance the view that in normal labour the posterior part of the head is fixed and the anterior advances, as in the mechanism in the rachitic pelvis. The question is not settled; there is a fallacy, as the position varies according to the state of the cervix. Pinard and Varnier's frozen section was made in the horizontal posture, whereas the woman is usually in the erect position in this stage. As regards the third stage, Pestalozza gives two sections where the uterus had been emptied by artificial delivery, and thus it had shrunk after extraction of its contents, and had not been emptied by contraction of its walls. In the first section the uterus measures 8 in. by 4 in.; the anterior wall is 1 in. in thickness, and the posterior wall, to which the placenta is attached, only ¼ in. The posterior wall has not contracted or retracted. The second section was from a case of twins, where the mother died from sudden congestion of an enlarged thyroid; the first child was delivered by forceps, the second by turning. The uterus measures 8 in. by 4½ in. by 5 in., and the fundus rises to 7 in. above the pubes. There is great diminution of the area of the uterus without separation of the placentæ. The placentæ are folded like a sponge, and yet with a diminished site there is no separation. Pinard and Varnier show a section of a uterus in the third stage. The case was one of triplets; the placenta of the twins is on the posterior wall, and that of the third child on the anterior wall. The section exhibits the placental site shrunk, the placentæ in folds or bulging at the borders, but not separated. The only place where there is a little separation is for one inch at the lower border. In a previous paper Dr. Barbour from his own work stated that the placenta did not separate till the beginning of the third stage and that there is no open space in the uterus at this time. In normal labour no separation takes place until retraction has occurred. During this retraction the uterine vessels are closed. In conclusion, Dr. Barbour discussed the general question of the knowledge gained from frozen sections in relation to labour in its clinical aspect—how these dealt with anatomy rather than with physiology, with position and not with movement, and with planes, not with a body in its general configuration.—Dr. HAULTAIN and Dr. BALLANTYNE spoke, and Dr. BARBOUR replied.

Dr. W. E. FOTHERGILL read a paper on the Height of the Fundus and the Shape of the Uterus when the Head is at the Brim and at the Vulva respectively. The results of measurements in thirty cases were that with the head on the vulva the fundus was one-third of an inch higher than in the former position, and that the uterus was narrower by one inch and had diminished by about one inch antero-posteriorly when the head was in the latter position.

Dr. W. E. FOTHERGILL also read a paper on Walcher's "Hanging Legs" Position, with special reference to its value where the perineum is in danger. Walcher's position is obtained by placing the patient across the bed with the hips at the edge, when the legs are allowed to hang down without touching the floor; a pillow can be placed below the buttocks if necessary. He had measurements of the diagonal conjugate in six cases, these were made under an anæsthetic, and comparison made between the results obtained in the lithotomy and in Walcher's positions. In the series there was an average increase of 0·93 cm. in the diagonal conjugate with the patient in Walcher's position.—Dr. BALLANTYNE alluded to a difficult high forceps case where he had endeavoured for about an hour to effect delivery in the lithotomy position; the assistants becoming tired he allowed the legs to hang down, and the head was then immediately and easily delivered.—Dr. BARBOUR had no doubt of the benefit of this position, but it was difficult to understand its *rationale*. An increased diagonal conjugate might not necessarily mean an increase of the true conjugate.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Symmetrical Gangrene of Ears.—Cirrhosis of Liver in a Child.—Spindle-cell Sarcoma of the Female Urethra.—Epithelioma of the Cervix Uteri.

A MEETING of this Section was held on March 8th, the President, Dr. J. A. SCOTT, being in the chair.

Dr. H. C. TWEEDY exhibited the Heart and Lungs of a male patient aged thirty-five, who had suffered from Symmetrical Gangrene of the Ears. In the heart the left ventricle was hypertrophied, and the mitral valve narrowed, thickened, and covered with vegetations. The aortic valves were healthy, but the aorta itself was atheromatous. The right ventricle was greatly dilated and the tricuspid valve was surrounded with hard atheromatous nodules. There was an infarct of large size in the upper lobe of the right lung and one of smaller size in the left lung. The left kidney was enlarged and contained numerous cysts. The gangrene of the ears had commenced nineteen months ago, in the autumn of 1893, and in opposition to the contention that the case was one of Raynaud's disease, Dr. Tweedy urged—(1) the absence of typical paroxysmal pains; (2) the absence of defective circulation in the hands or feet; (3) the absence of vesicles, bullæ, or ulceration in the parts affected; (4) the steady continuity of the morbid process, there having been apparently no successive attacks with intervals between; (5) the age and sex of the patient; and, lastly, that the general condition of the circulation, as the result of the disease in the mitral valve and the atheromatous condition of the vessels, supplied a possible explanation for the morbid change that had taken place in the ears. As there was no history of rheumatism, it was possible that the condition of the heart and bloodvessels might have been secondary to the morbid process, which was considerably

advanced in the kidney.—Dr. MCWEENEY asked whether the patient had any pain. He thought it might possibly be a case of Morvan's disease, and would like to know if the brain or spinal cord had been examined.—Dr. DALY said that he had been the cause of bringing this case forward. The man was very much worse in cold weather. He had seen his hands wrinkled with cold. He had showed the case to many within the last eighteen months, all of whom had diagnosed Raynaud's disease. He was at the Richmond and Adelaide Hospitals, and had no heart murmur then When the disease commenced it was symmetrical. He suffered intense pain. He never had syphilis. He was twelve years in the army, being four in Ceylon. He was a strong, healthy man.—Dr. BENNETT stated that the gangrene had commenced in the early autumn, when there was not much cold.—Dr. WOODS saw the case at the Richmond Hospital a year and a half ago. He had seen three other cases of Raynaud's disease, all of which were men, but this was the most pronounced. He had examined the man's heart and had found a mitral systolic murmur. He believed it was a case of Raynaud's disease the symptoms of which were aggravated by heart disease. He recommended him to wear ear-caps over his ears. As well as he remembered, the right ear was worse than the left.—Dr. PARSONS wished to know where the man was when it occurred. He thought the necropsy had not done much to clear up the case. He did not understand how the circulation in his ears was so bad as to cause gangrene in spring and summer, for there appeared not to be any dropsy of the extremities, which was one of the first signs of cardiac failure. He wished to know if the urine had been examined for methæmoglobin, which had been found present in cases of Raynaud's disease.—Dr. DALY said that the disease commenced one year and eight months ago. He was living in Dublin at the time. He never suffered from chilblains. When he examined the urine there was no albumen in it. The man worked inside a store and was not exposed to the cold.—Dr. TWEEDY, replying, said that the necropsy was made under great difficulties, and did not last more than ten minutes. He had been unable to get a portion of the ear. The brain and spinal cord had not been examined. There was no definite pain till the hard masses of slough formed, which then caused him pain to lie on the ear. He still thought the cardiac disease sufficient to cause the condition of his ears. It could not have been a frostbite, as the disease commenced in the early autumn. The heart trouble must have been pretty chronic from the post-mortem appearances. He had only seen one other case of Raynaud's disease. It was in a child, and the little toes were gangrenous, and in addition there were vesicles and bullæ present. The child had also paroxysmal pain. In this case the hands and feet were frequently very cold. He had not examined the urine for methæmoglobin as the man had only been a short time in hospital and died suddenly.

Dr. O'CARROLL showed a Cirrhotic Liver taken from a child aged eight years. The specimen was remarkable by reason of the fact that from the under surface protruded downwards a large mass consisting of nut-like islands of hepatic tissue surrounded by thick bands of glistening fibrous tissue, and which during life had given rise to the suspicion of a tumour of the liver or in its neighbourhood. No previous history of the patient could be obtained sufficient to settle the question of causation, but the large amount of peri-hepatitis seemed to hint at a syphilitic origin of the disease.—Dr. MCWEENEY and Dr. PARSONS alluded to the difficulty of diagnosis in the case. Dr. McWeeney had only seen the naked-eye appearance.

Dr. MCWEENEY showed an example of Spindle-cell Sarcoma of the female uthera and also a specimen of Epithelioma of the cervix uteri, with sections.

METROPOLITAN DISPENSARY.—The annual meeting of this institution was held in Fore-street, E.C., on March 15th, Mr. J. J. Baddeley, the treasurer, presiding. The committee's report showed that the visits paid by the medical staff to patients in their own homes were 500 fewer than in 1893, and explained the fact by the general improvement in the public health. During the year 13,182 patients came under treatment. The total expenditure was £883, and the balance in hand at the end of the year was £403. Grants of £100 were made to the dispensary by the City Parochial Foundation, and also by the Cripplegate Foundation; the Clothworkers' Company subscribed £20 and the Saddlers' Company £10. The usual votes of thanks were accorded to the treasurer and medical officers.

Reviews and Notices of Books.

Transactions of the Epidemiological Society of London. New Series. Vol. XIII. Session 1893-94.

THE Transactions of this Society always afford good reading, but the latest volume presents points of special interest. It contains nine papers and a supplement, and we must confess to having, like the novel reader who reads the last chapter of a new novel first, turned first to the supplement; or, rather, in strict accuracy, to having done so immediately after reading the President's inaugural address upon the History of Epidemiology in England. In that address Dr. Payne drew attention to an important, though little-known, contemporary account of the great Plague of London in 1665, and suggested that the Society would be doing excellent service to medical literature were it to print this treatise in full or in part. This suggestion the Society has carried out, and has printed the whole treatise, publishing it as a supplement to the present volume of Transactions. "Loimographia, or an Experimentall Relation of the Plague, of what happened Remarkable in the last Plague in the City of London....." by "William Boghurst, Apothecary in St. Giles'-in-the-Fields, London, 1666," has hitherto lain in obscurity as No. 349 of the Sloane MSS. in the British Museum, and now appears in print for the first time. Its existence, however, has been known, and it has been drawn upon by several writers. Defoe is thought to have made use of it for his great story of the Plague; Dr. Payne has himself quoted it in his article upon the Plague in the "Encyclopædia Britannica"; Dr. Creighton describes it in his "History of Epidemics"; and it has even been alluded to in Germany by Haeser in his "Geschichte der Medizin." But these facts in no way detract from the real service which the Epidemiological Society has rendered in now printing the treatise in full.

Of the author comparatively little is known, save that he was an apothecary at the sign of the White Hart in St. Giles'-in-the-Fields, and that when all who could were flying from the pestilence he remained and attended the sick without fear or faltering—a fact on which he insists with pardonable pride. His epitaph, we learn from Dr. Payne's introduction, declared that "he was an honest, just man, skillful in his profession and in the Greeke and Latine Tongues, delighting in the study of Antiquity." This is fully borne out by the present treatise, which contains much evidence of Boghurst's acquaintance with the classical medical writers, from Hippocrates downwards. But while accepting the medical traditions of his time, he was far from bowing down before them, and was clearly able to make original observations for himself. Clinically, he was evidently a close and acute observer. The work is divided into twenty-eight chapters: on the causation, prognosticks, diagnosticks, good and evil signs of the Plague, and so forth. Of these the first is the most interesting, in which the author discusses "the nature and causes of the Plague as a student in Physick." In this he goes curiously near what must now be accepted as the true explanation of the origin of the disease when he writes: "The essence of the Pestilence is lodged in some peculiar venome that is contrary and destructive to the vitale principles of man. That this venome is a body or concretion of many little bodies, though very subtle and invisible, can bee no doubt for those that have outgrown Aristotle and are acquainted with the Epicurean or corpuscular philosophy." Of the two so-called schools of contagionists and localists Boghurst must be counted a stout supporter of the second. He sums up his views as follows: "The Plague or Pestilence is a most subtle, peculiar, insinuating, venomous, deleterious exhalation arising from the maturation of the ferment of the fæces of

the earth extracted into the Aire by the heat of the sun, and diffused from place to place by the winds, and most times gradually, but some times immediately, aggressing apt bodies." This is not a happy example of the author's literary style; as a rule, when he escapes from the medical jargon of his age, he writes in all the simplicity of good Saxon English. He further displays a commendable mixture of common sense with his technical knowledge, and a deep conviction in the correctness of his own views and readiness to uphold them against all who may differ from him, while a leavening sense of humour makes his treatise far more readable than many old medical treatises. His account of the rise and early spread of the Plague in London differs in many important points from that given by Hodges, who has been the authority for most subsequent writers upon this epidemic, and, if for this fact alone, the Epidemiological Society was justified in its action, and is to be congratulated upon giving permanent form to a really valuable work.

Dr. McVail's paper upon the Aërial Convection of Small-pox from Hospitals deals with one of the most burning questions of recent years, and led, it may be remembered, to an adjourned discussion of considerable interest. Beginning with an account of the classical controversy in the last century between Haygarth and Waterhouse concerning an outbreak of small-pox in Charleston, this paper goes on to discuss some of the more important evidence published in recent times as to the part which the air plays in spreading the contagion of small-pox. Without adding anything new to our knowledge upon this subject, the paper is nevertheless a thoughtful essay upon a most important topic. The publication of Mr. W. H. Power's investigations at Fulham, now fourteen years ago, brought this question to the forefront of practical public health questions, and the additional evidence from at least half a dozen metropolitan hospitals and as many in the provinces has only tended to confirm the conclusions he then formed. With these Dr. McVail is in full accord, believing that aerial convection does occur from hospitals, though not denying to personal communication some share in the explanation of "special area" incidence of small-pox.

The paper entitled a Contribution to the Epidemiology of Cholera in Russia, by Dr. F. G. Clemow, is based on a careful study of the epidemics of 1892 and 1893, and although the maps and charts which were used to illustrate it have not been reproduced, it is written so lucidly that their absence is less to be regretted. The paper is one of no small interest and importance. In many respects the conclusions arrived at are in conformity with previous experience—e.g., the comparative immunity in the second year of an epidemic enjoyed by a district that has suffered severely in the first year; the brevity of the incubation period of cholera; and the greater fatality in children and elderly persons than in the middle-aged. Some interesting details are given as to the dissemination of the disease in a country where bazaars and fairs lead to large and shifting gatherings of people. That the disease is communicated from person to person Dr. Clemow is convinced, but he guards this view by admitting that the poison gains entrance by the alimentary canal. Instances of its conveyance by families and of contamination by water-supply are cited.

The paper upon the Distribution of Influenza Mortality in England and Wales in Recent Years is a careful statistical study by Dr. Franklin Parsons. It is illustrated by a number of useful diagrams and tables. Dr. E. D. Dickson of Constantinople writes an interesting account of the cholera in Mesopotamia and Syria, and communicates the report upon cholera in Persia, written by Dr. Camposampiero, Ottoman sanitary delegate at Teheran, to the Constantinople Board of Health.

Handbuch der Physiologischen Optik (*Handbook of Physiological Optics*). Von H. VON HELMHOLTZ. Zweite Auflage. 9te and 10te Lieferungen. (Second edition, 9th and 10th parts.) Hamburg und Leipzig: Leopold Voss. 1895.

WITH these two parts, embracing 160 pages, the late Professor Helmholtz's celebrated treatise is nearly brought to a close. In a short preface Dr. Arthur König of Berlin states that the author before his lamented decease believed that he had practically completed the editing of the second edition, the succeeding parts requiring little alteration or addition. The "Physiological Optics," it must be understood, was original in its conception, was founded largely on the experiments and reasonings of its author, and was not intended to be an encyclopædia of optical science. It has proved to be, from the precision of its statements and the novel manner in which the phenomena of vision were treated, a storehouse from which all subsequent writers on optical subjects have largely borrowed, and which constitutes the solid foundation on which the physiological side of optical science mainly rests. The two parts now before us contain the subjects of the rotation of the eyes mathematically treated; the sense of position in space as determined by the visual sense; the explanation of various illusions of the visual sense; the consideration of the blind spot, of unilateral vision, and of the stereoscope and stereoscopic vision. The work is worthy of its distinguished author.

The Uric Acid Diathesis: Gout, Sand, and Gravel. By Dr. F. LEVISON (of Copenhagen). Translated by Dr. LINDLEY SCOTT. London: Cassell and Co. 1894.

THIS work has received such a favourable reception in other countries that Dr. Scott was encouraged to translate it into English, believing that it would receive a welcome in this country. As the translator observes in his preface: "It may be regarded as a logical summary of the more recent researches on the pathology of uric acid, and on the action of various remedies recommended in the treatment of this diathesis." After a full description of the most practical methods of estimating uric acid, the formation and physiological signification of this body is carefully considered. The conclusions at which Dr. Levison has arrived are interesting. He lays special stress on Horbaczewski's observation that there exists a constant proportion between the number of white corpuscles in the blood and the amount of uric acid secreted. He states that the amount of uric acid excreted in twenty-four hours is not influenced to a great extent by food, but adds that the easily digestible animal albumens set up digestive leucocytosis and formation of uric acid much more quickly than the vegetable albumens, which are difficult to digest. Other interesting sections are devoted to the consideration of the subject of uric acid in the blood and the chemical compounds of uric acid in the blood and urine.

Turning to the clinical side of the question, the etiology, pathogenesis, symptomatology, course, and pathological anatomy of gout are fully and admirably described. Prophylaxis and treatment occupy a full share of attention and many useful hints and valuable information are given. "Sand and gravel" are finally considered and the treatment fully discussed. The work is capitally translated, and to those who are especially interested in this branch of medicine will prove most acceptable and well repay perusal.

Degeneration. By MAX NORDAU. London: Heinemann. 1895.

Ætas parentum, pejor avis, tulit
Nos nequiores, mox daturos
Progeniem vitiosiórem.

THIS is Dr. Nordau's despairing cry—and a very old one; but, in spite of the trouble he has been at to justify it, we venture to think he is mistaken. Dr. Nordau will probably

include us among the "grapho-maniacs who dominate the entire press" for venturing to disagree with him in his conclusions, even if to do so is to write ourselves down as degenerate. That there undoubtedly does exist at this time a school or sect—call it what you will—which delights in sex problems, strange idiosyncrasies of dress, eccentric drawings, and mystical writings, among other things, no one can help seeing; but the same state of things has always been present, more or less, in every age. Everyone knows the excesses that were fashionable in ancient Rome and Athens; strange Oriental religions, affording scope for every variety of "mania" (the reader will find a list on page 242), were imported, and everything that could in any way minister to the pleasures of either mind or body was systematically employed. Coming down to the Middle Ages we find the same thing. Flagellants and mystics of all kinds gave way to the wildest excesses; and so the story unfolds itself through the Puritan excesses, on the one hand, and the court dissoluteness, on the other, of the seventeenth century to the appalling outburst of the French Revolution and the Napoleonic idolatry of the eighteenth century. Later developments have certainly occurred with startling rapidity in the last forty years or so, but where we venture to join issue with Dr. Nordau is in his over anxiety to attribute the taking pleasure in almost any form of art or mental culture to degeneration. Take his account of the degenerate's house. Old china, silver ornaments, Oriental carpets—the possession of anything, in fact, that is prized for its colour or design is a sign of a weak mind. "All is one discrepant jumble; the unity of abiding by our historic style counts as old fashioned and Philistine." We cannot see why a person may not take pleasure in the different styles of art or what there is of degeneracy in a dislike to monotony. Let anyone compare the style of a modern room furnished and decorated by a person of taste with the drawing-room of "the fifties." Here was one definite historic style, and what a style—the white and gold paper, the elegant suite of rosewood and Berlin wool work furniture, the Brussels carpet, with the stone-coloured ground and sprawling pattern of virulent red and pink roses as big as cabbages all over it, and the round table with the drawing-room books on it, all these made up of a "composition"; but where was "the feeling of repose"?

Dr. Nordau sees degeneracy in everything except the music of "Cavalleria Rusticana." He falls foul of Rossetti's fondness for refrains. This was a characteristic of old poetry which was handed down by oral tradition, the refrain being like the large beads on a rosary—a sort of milestone to mark the point the reciter had arrived at, and though, through the invention of printing, it has lost its original point, its use is still a perfectly legitimate way of giving an old flavour to a poem, just as the use of a scale with a whole tone between the leading note and the tonic is a legitimate way of giving an old flavour to music. To call it "echolalin" is absurd. If we go on Dr. Nordau's principle we can find mysticism in the most unlikely quarters—e.g.:

> "I see Jerusalem and Madagascar,
> And North and South Amerikee,
> And the British fleet a-riding at anchor,
> And Admiral Napier, K.C.B."

Now here is megalomania and echolalia and all the other characteristics of literary mattoids. Observe the mysticism. The author could not have really imagined that little Billee was able to see all these countries, but with the weird transcendentalism that belongs to the degenerate he wished to include the whole world in the vision of his character. So he starts with Jerusalem, the mediæval centre of the earth, and then goes on to Madagascar, where flourish the Cryptoprocta and many another strange beast, which by their structure carry us back to prediluvian days; then Amerikee, with its traditions of Atlantis and the isles of the blessed; and then, with the inconsequence which is so marked a feature of the mystic, he links with Amerikee the British fleet and Admiral Napier, K.C.B. As Dr. Nordau says: "There is no connexion between these phrases. They are strung together simply because they rhyme. It is a startling example of echolalia."

That the fever of degeneracy will wear itself out there can be no doubt; just as the activity of a bacillus is put an end to by excess of its own products, so the activity of the modern school will bring about its own death. We cordially recommend a perusal of Dr. Nordau's book both for its extreme interest and as an example of the pitfalls into which a really able man may fall by pushing a theory too far.

The translator's name is not given, but the work has been done exceedingly well.

LIBRARY TABLE.

The Aseptic Treatment of Wounds. By Dr. C. SCHIMMELBUSCH. Translated from the Second German Edition by ALFRED THEODORE RAKE, M.B., B.S., F.R.C.S. London: H. K Lewis. 1894. Pp. 250.—Aseptic, as opposed to antiseptic, surgery is daily increasing the number of its adherents in this country; but the success of asepticism depends on the thoroughness of the purification of everything that may come into contact with the wound, and this is by no means easy. We therefore welcome the appearance of the English translation of this little book of Dr. Schimmelbusch, as in it are given clear and detailed directions for rendering aseptic the surface of the body to be operated on, the instruments to be used, and the dressings to be applied to the wound. It is copiously illustrated, and certainly it is a very good representation of the methods of aseptic treatment. A copious bibliography of the subject is appended. The style of Mr. Rake's translation is good and readable.

Urinary Surgery. By E. HURRY FENWICK, F.R.C.S. Bristol: John Wright and Co. 1894. Pp. 219.—This volume is a member of a series of "Epitomes of Modern Surgical Progress," and is intended to be a *résumé* of the recent literature of the surgery of the urinary organs. Within the last few years changes of great importance have been made in this department of surgery, and further progress, in details at least, is taking place almost daily. A work embodying these recent changes can hardly fail to be useful, and Mr. Fenwick's book certainly goes far in the direction of accomplishing what it claims. It gives summaries of more than 300 papers, and in each case gives the reference to the original article, so that if further information is needed it can be easily obtained. Mr. Fenwick also contributes "editorials" on special subjects, such as Tumours of the Bladder, where mere abstracts of published papers would fail to give an exact account of the present state of the subject.

Manual of Diseases and Deformities of the Spine. By R. L. SWAN, F.R.C.S. Irel. Dublin: Fannin and Co. 1894. Pp. 194.—The diseases and injuries of the vertebral column are of so much importance and are so frequently met with that it cannot be denied that they are deserving of a special treatise. The work before us deals with all the ordinary forms of disease of the spine, and includes chapters on the paralyses consequent upon spinal disease, railway spine, and torticollis. In the description of the treatment of spinal caries an account is given of the "hammock" method of applying a plaster jacket, which, for some cases at least, is certainly to be preferred to the more usual method of suspension. The work is illustrated by thirty-three lithographs, which have a pleasing but certainly somewhat novel effect.

MAGAZINES FOR MARCH.

Clinical Sketches.—The third number of this magazine is up to the level of its predecessors. An article which will be read with melancholy interest is by the late Mr. Hulke, and is an account of a case of Malignant Disease of the Colon in which the presence of a large concretion formed by charcoal and bismuth blocked for a time the sigmoid flexure, causing obstruction and masking the presence of the original disorder. An obituary notice of the late President of the Royal College of Surgeons of England is accompanied by an excellent portrait.

The *Strand Magazine* contains several articles of interest—for instance, one upon the Manufacture of Explosives and one upon Eccentric Ideation, and an exceedingly poor story, with medical details, entitled "The Silent Tongue." This story is one of a series of medical stories now appearing in Mr. Newnes's popular paper, and none of these have been particularly good. We are tempted to think that in the story with medical *motif* the attempt at accuracy of detail detracts from verisimilitude.

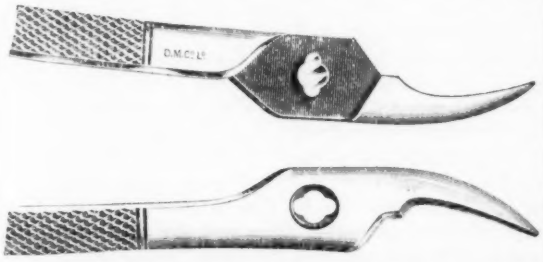
The Englishwoman.—Miss Ella Hepworth Dixon is responsible for the appearance of a new monthly magazine intended to meet mainly the taste of feminine readers. As is now becoming the fashion in our lighter periodicals, the serial is dispensed with, but there are several complete stories, the most noticeable of which is in dialogue form by Miss Violet Hunt. Mr. Hitchens deals in a healthy manner with the case of a decadent boy, and all medical men, recognising the extent to which this disagreeable class has multiplied, must welcome the signs of general repulsion which are now becoming manifest.

ERRATUM.—In the review of Baldy's "American Text-book of Gynæcology," which appeared in our issue of March 2nd, we omitted to mention that Mr. F. J. Rebman, 11, Adam-street, Strand, is the London publisher.

New Inventions.

NEW DENTAL FORCEPS.

ANTISEPTIC precautions have been long recognised to be as necessary in dental as in surgical operations. Cases have been put upon record where specific diseases, and syphilis in particular, have been inoculated by the use of unclean instruments. When dental forceps are put in chemical solutions for the purpose of sterilisation—though it is not necessary to render the joint aseptic as in instruments used for an operation like laparotomy—experience shows that the



solution quickly finds its way into the joint, and mixing with blood and saliva, which trickle down the blades, collects there and causes rusting of the joint. The forceps thus becomes stiff and dirty, it being impossible, short of sending it to the makers, to take the blades apart. It is hoped that the instrument with a lock joint which the Dental Manufacturing Company (Lexington-street, Golden-square, W.) have made at my suggestion will overcome this, and will ensure thorough and easy cleansing.

J. SEFTON SEWILL, M.R.C.S., L.R.C.P., L.D.S.
Cavendish-square, W.

THE VENTILATION OF PLACES OF ENTERTAINMENT.

THIS has been a very hard season for all places of entertainment; and the problem of warming and ventilating buildings where large numbers of persons congregate has rarely offered so many difficulties. There is one place, however, where special advantages are enjoyed. As a rule the crowding of spectators together in a limited space is the chief cause of trouble. At Olympia it may be said that the space is almost unlimited. The difficulty here is the other way round; there is no danger of the place becoming too hot through overcrowding. The great hall measures 650 ft. by 400 ft., and is 130 ft. high. Though it would be possible to accommodate 10,000 spectators such a number is not likely to attend; but when we consider that there are 2500 performers it may often happen that the hall would contain, including the performers, some 10,000 persons in all. Even then the difficulty would be that of warming rather than of ventilation, for 10,000 people would still enjoy about 3000 cubic feet of air each. It is, therefore, important to note how the warming is accomplished. For this purpose it has been necessary to lay pipes which have a total length of nearly ten miles. These pipes contain steam under pressure. They are in the flooring of the passages and in the walls, thus heating the body of the structure. Then, at various intervals, and especially in places where cold draughts are likely to occur, coils are placed which can be fed with steam from the pipes, and a sort of damper enables the attendants to regulate the amount of heat the coils are to give. There are in all about 250 such coils. But this is not all; the large sheet of water, which is so useful to cool the building in summer, adds to the heat in winter. This water is warmed by the Rosher system. This consists of a system of steam jets which draws the water from the canals. The water is heated by the condensation of the steam, and is then injected back into the lake or canals through the bottom of the tanks by "spreaders." Nine heaters are thus employed, and a systematic circulation of heated water established. The heaters have also each an air valve by which air is forced into the canals, and this helps to keep the water fresh. By these means the temperature of this vast volume of water can be raised at the rate of 2° F. per hour, and is generally maintained at a temperature of 60°. Once a fortnight, on a Saturday evening, the whole of the water is cleared out and the bottom of the tanks carefully swept. It then requires eighteen hours to fill them afresh with a constant flow through a nine-inch inlet pipe.

The great secret of the even and pleasant temperature that pervades this vast building is the fact that the system of warming is kept in full activity day and night during the whole of the season. It requires three days to warm the building, and then it is never allowed to become cool again. This is the secret of true comfort and the reason why houses in cold climates—Russia, Canada, &c.—are much warmer and more comfortable than in such moderate climates as that of England. At Olympia the heat is if anything higher in the passages than in the auditorium, and the heat is maintained day and night. Such is also the case in a Russian house; but in an English house the passages, hall, staircases &c. are rarely if ever heated, and in the rooms the fires go out at night. Thus there is no uniformity, but draughts and constant changes of temperature in different parts of the building. At Olympia, in the huge auditorium between the spectators and the stage, there is a vast surface of warmed water which constitutes an excellent medium for retaining and distributing heat in a slow and uniform manner. The dry and unwholesome air that is the consequence of over-heating and the foul air that results from overcrowding and inefficient ventilation, are dangers that too often prevail in places of amusement. The absence of any such inconvenience and danger has been not the least of the attractions which Olympia offers to the public.

THE LANCET.

LONDON: SATURDAY, MARCH 23, 1895.

A SPECIES of duel has lately been fought between the General Medical Council, on the one hand, and the Obstetrical Society, on the other, and has been rendered triangular by the interposition of the opponents of the registration of midwives. The feelings which have been excited on all sides over this subject have been, we think, unnecessarily heated and bitter. Certain distinguished leaders of the obstetric world—Sir JOHN WILLIAMS, Dr. PLAYFAIR, Dr. CHAMPNEYS, Dr. HERMAN, and not a few Irish and Scotch physicians,—who doubtless thought they were doing a kindly and useful action in giving their countenance to a certain amount of training in midwifery and providing for the certification of women who assume the title of midwife and practise among the poor,—have, it would seem in the opinion of some, been practically brought before the Council on a charge of infamous conduct in a professional respect. Dr. PLAYFAIR uses the strongest adjectives he can find—"outrageous," "insulting," &c.—to characterise the action of the Council. There is certainly some excess of imagination and of language on this side. The other is not much behind it. Dr. LOVELL DRAGE, for instance, does not see why the Council should mete out treatment to the Obstetrical Society different to that which it administers to gentlemen who employ unqualified assistants. There is in some of the correspondence which has been going on a want of acquaintance with the action and views of the General Medical Council which we should scarcely have expected in leaders of the profession with regard to such questions. Thus, Dr. PLAYFAIR says that, "so far as he knows, the Council has expressed no opinion on the examination and registration of midwives," the fact being that the Council has expressed many times, often in response to Government, its opinions on these subjects in the last twenty years.

Dr. PLAYFAIR does but scant justice to the General Medical Council when he proceeds to urge that it has heard only one side. To take only the last year as an example, the Council was approached by the advocates of both sides, as will be seen by referring to the published Minutes for 1894. Thus, at its May meeting the following rider to a verdict of a coroner's jury was received from the Home Office for the consideration of the Council: "The jury desire most strongly to censure JANE RUGG for not calling in medical assistance upon difficulties arising on the deceased giving birth to a child, and are of opinion that the Legislature should interfere to prevent women acting as midwives unless trained and certificated for such purpose." On the other side memorials reached the Council in numbers protesting against any regulation enabling persons to practise midwifery who were not fully qualified to practise medicine, surgery, and midwifery. It may be true that the Council at its last few meetings has been mainly appealed to by the party opposed to legislation; but that is probably because the opposition is of recent origin. It is only within the last few years that any persons have been found to maintain that the midwifery of the very poor can all be done by medical men or fully qualified medical practitioners, and that there is no need of, or justification for, legislation to regulate the use of the term "midwife" by women who practise as such among the poor. Dr. WILKS has pointed out that there is some confusion between two distinct things which in England have always been well distinguished—the midwifery of an educated and fully qualified practitioner and the "midwifery" of a woman without special training, or with very little, who has made herself useful and acceptable to poorer neighbours who in their hour of need cannot afford for obstetric services the minimum fee required by medical men. The question whether the tragedies in the hands of ignorant midwives which so shock the public from time to time can be got rid of without legislation for the training or, at any rate, for the registration of midwives is one that cannot be settled offhand. In any case, however, it is a strange thing for the leaders of the Obstetrical Society to say that the Council hears one side only and has never expressed opinions on the fundamental question in dispute. We venture to recommend to Dr. PLAYFAIR a study of the minutes of the General Medical Council bearing on this subject, beginning, say, twenty or twenty-one years back. He will see many indications of respectful interchange of opinion between the scientific society of which he is an ex-President and the Council, which contrast favourably with the somewhat heated language which has lately obtained, and which seems to have raised fears of martyrdom in the President and members of the society.

In requiring that the language used in the certificates of the Obstetrical Society shall be such as not to imply licence to practise, the General Medical Council is only consistent with its own contention throughout, and with the obvious fact that the document given by the society has no legal value. Sir JOHN WILLIAMS says the word "diploma" is used in testimonials given to successful brewers. Even if this be true, it does not justify its use by the Obstetrical Society acting as an examining body. The Council cannot be said to have acted with undue haste. It has given repeated hints as to its objections to the document issued by the Obstetrical Society, which we publish on another page, and of which Dr. PLAYFAIR'S version in a recent letter to us is a somewhat imperfect copy, though even in that form the owner of the diploma is styled "a skilled midwife," and it has not asked more than such a modification of language as shall make it clear that no legal licence to practise is conferred. Dr. LOVELL DRAGE himself will, we fancy, be satisfied if the document bears this on its face. We are glad to gather from Dr. PLAYFAIR'S letter alluded to above that the society has resolved not to issue any more "diplomas" until a form is decided upon satisfactory to the General Medical Council. Under these circumstances we see reason to hope for a speedy disappearance of the somewhat strained relations at present existing between the General Medical Council and the Obstetrical Society. For our part we entirely acquit the

society of any purely selfish motives in this matter, and believe, as Dr. PLAYFAIR says, that they would gladly give up to others the work of examining midwives. In conclusion, let us add that THE LANCET always has been, and always will be, jealous of the rights of the general body of the profession and zealous in protecting their true and best interests. The question of the registration of midwives is undoubtedly a difficult one, but we do not yet despair of a solution of the difficulty which will be in accordance with the dictates of humanity and satisfactory to the whole body of our profession.

EGYPT and Algeria witness a large exodus of their winter visitants during the month of March, the melting of the snows in the Alps is the signal for the gradual dissolution of the winter colonies of Davos and St. Moritz, and during April the Riviera and southern French resorts become gradually deserted. This change from winter to spring quarters raises many difficult questions for the chronic invalid and his advisers, and at some of these difficulties we propose to glance, without attempting to lay down any hard-and-fast lines in a department of practice where individual idiosyncrasy counts for so much and where the special experience of the regular medical adviser is so important. The first question that naturally arises is why the invalid should leave his winter quarters at all. He has done well, let us assume, at Mentone, St. Moritz, Malaga, Luxor, Algiers, or Madeira. Why, then, leave a resort that has been proved favourable to his malady? The answer to this question is not quite so obvious as it may to some appear to be. It is true that a summer sojourn in Egypt or Algeria is practically impossible for the European invalid, but the same statement cannot be correctly made regarding the Alpine resorts or Madeira. There are some authorities with large special experience who hold that the summer climate of Davos or the Engadine is just as favourable for pulmonary complaints as the climate of winter. We believe this opinion to be to a considerable extent mistaken, but it is not manifestly absurd. Then, again, it is not very unusual for the winter visitant to Madeira or the Riviera to take to the hills at the approach of summer, and there encounter the hot season. Yet, we take it, the attempt to persuade the average invalid to make a permanent residence of his winter quarters is always predestined to failure. He longs for change, he yearns for ever so brief a sojourn in his own country, and he is deeply convinced that even the most favourable climate is not equally favourable at all seasons of the year. These feelings are not only perfectly natural, but may be defended on strong scientific grounds. Most sanitaria are—to put it plainly—dull to a degree, and the hackneyed round of medical treatment, regulated hygiene, and stereotyped amusements becomes to not a few individuals a hardly tolerable boredom. This boredom would be to many absolutely unendurable if there were no prospect of speedy release from it. Then, while there is much to be said for the principle of finding the climate that suits the invalid best and keeping him there, it is quite probable that there are cases with regard to which climates, like drugs, after a time lose their beneficial effects. But the most solid ground for approving of a change of quarters at the end of winter is the incontestable fact that season may make all the difference between a good climate and a bad one, and that it is not as a broad principle true that because a climate is beneficial in winter it is likely to be equally beneficial at all seasons. Most of the southern sanitaria are beyond question much too hot in summer for British invalids. Then, to take the most disputable case, it is not a fact that the climate of the Alpine resorts is as favourable to pulmonary complaints in spring, summer, and autumn as it is in winter. The average of settled sunny weather is certainly higher in summer, there is less wind at this season, and the relative humidity of the air is less. These facts seem to us incontestable, and are quite consistent with the contention that the Alpine sanitaria are in certain cases good summer resorts. But the attempt which has often been made to prove that summer is as favourable a season as winter, and that invalids are extremely foolish to leave their winter quarters at the approach of spring, seems to us most injudicious.

Assuming, then, that invalids are, as a general rule, quite justified in their usual practice of seeking a change at the end of winter, various important questions arise. When should the change be made? Should it be made abruptly or gradually? What are the most convenient intermediate stations between winter quarters and the home country? The first question does not admit of any very precise answer, as so much depends upon the patient and so much upon the resort in which he has spent the winter. Few invalids remain south of the Mediterranean after the end of March; in the Alps the melting of the snows is generally taken to mark the transition between the seasons; while residence in the resorts of the Riviera or Southern France may be prolonged far into April or even later. As regards the second question, it is probable that abrupt transitions are more fraught with risk at the end of winter than at the beginning. An invalid may proceed with comparative impunity directly from England to the Alpine stations, but it will be well when possible to make the return journey in a more deliberate manner and to linger for a time at some intermediate station.

This leads us to the last point, What are the most convenient intermediate stations? To those who have wintered in Cairo or up the Nile, Corfu may be recommended, or Palermo, or Malaga. From Algeria recourse may conveniently be had to Ajaccio or Hyères. It must be remembered that none of the Italian resorts possess good spring climates, except the resorts of the Riviera—viz., San Remo, Bordighera, Alassio, Pegli, Nervi, and Rapallo. Those who have wintered in the Riviera have not, as a rule, much difficulty about an intermediate station, as they can stay in their winter quarters until the time has come when they can safely make the homeward journey by easy stages. The case of the Alpine sanitaria is more difficult, as a thoroughly satisfactory spring climate scarcely exists in Switzerland or Northern Italy. Among the places that may be recommended at this season, but with considerable reservations, may be mentioned Bex in the Rhone Valley, Montreux, and Gardone Riviera on Lake Garda. Spring is, indeed, a treacherous and most unsatisfactory season for the invalid over a large

part of Europe, and an ideal spring climate is still to seek. It will be well for the invalid to remember that as this is his most trying season at home, so is it in a large degree even in the most favoured of foreign resorts. He must relax none of his usual precautions, and must remember that the combination of bright sunshine with cold winds, which is so characteristic of the spring climate of most health resorts, is for him a peculiarly perilous one. Spring is the season *par excellence* for the ravages of pneumonia at home, and it is then also that the chronic pulmonary invalid abroad is most prone to those inflammatory complications which do so much either to imperil his life or to retard his recovery.

APPLIED science has its disadvantages as well as its advantages. The introduction of steam as a source of motive power brought with it a series of disasters caused by the sudden unloosing of the pent-up forces in the steam boiler through some defect in its construction; coal gas, since it was adopted as an illuminating agent, has introduced its share of dangers, though it must be admitted that accidents from this cause are rarer than they formerly were; while its competitor, electricity, since it has been laid down for lighting purposes, has actually been credited with manufacturing sodium beneath our pavements, which in contact with water has fired and ignited its rival, which, so it is asserted, has leaked from the mains. A happily less familiar source of public danger, but which may prove to become more frequent as the demands on applied science increase, is, as the experience of the past week would teach, the conveyance of certain chemical commodities along our highways both on land and sea. The bursting of a steel cylinder containing compressed oxygen gas at Fenchurch-street Station on Friday, March 15th, by which a man in charge of it lost his life, cannot be easily accounted for. Why the cylinder up to that moment had successfully resisted the enormous internal pressure of 1800 lb. per square inch, and nearly double that amount if in the ordinary course it had been properly tested before charging, is the mystery which surrounds that unfortunate occurrence. It can hardly be supposed that the cylinder contained an explosive mixture of hydrogen (or coal gas) and oxygen, for example, since the heat developed at the time of charging would probably have been sufficient to cause a powerful explosion. Again, there would appear to be no evidence that the cylinder was submitted to any shock; and, indeed, there is no reason to believe that even if that had been the case the cylinder would have sustained any injury. A properly constructed and tested cylinder is known by experiment to be free from the danger of bursting through being dropped, even from a height of thirty feet and upwards. The only explanation that remains is that an intra-molecular change had taken place in the steel of the cylinder, so that the metal had gradually returned to a brittle and crystalline condition, which careful re-annealing would have eliminated. We believe that it is the practice of the makers of oxygen gas to anneal the cylinders, not only in the first instance, but afterwards every few years, in order to correct any tendency in the metal to harden and become less ductile in the interval. This seems to us to be, therefore, in the present case the only plausible theory, and, that being so, it is extremely desirable that some steps should be taken to compel gas-makers to make rigid examination of the cylinders at short intervals, so that, in addition to pressure tests, any physical change—from ductility to brittleness—may be counteracted by an annealing process.

It is remarkable, however, assuming that the disaster was due to bursting merely and not to violent combustion—and in that sense comparable to an ordinary boiler explosion—that the discharge was so far-reaching in its effects as to destroy gas lamps and to blow out the face of the clock at the extreme end of the platform. At the most the cylinder probably did not contain more than 20 cubic feet of gas, but the pressure, be it observed, is generally twenty times greater than in an ordinary steam boiler. Had the accident occurred in more confined limits, as, for example, in a railway carriage or in a lecture room, the loss of life might have been appalling. The disaster arising from the storage of chemicals which happened on March 14th on board a Mediterranean steamer belonging to a French company was of a different but equally serious nature. In this case two fluid chemicals mingled together with the production of a suffocating gas, which resulted in the loss of two lives and serious injuries to four other persons. It appears that the vessel, meeting with very heavy seas on rounding Cape Matapan, was at length struck by a huge wave, which shattered a great number of jars that were stored on the deck, some containing sulphuric and others hydrochloric acid. Apart from the intensely corrosive properties of the mixed acids, which found their way into the sleeping compartments of several of the passengers, the effect of the sulphuric acid mixing with hydrochloric acid would be of course to produce gaseous hydrochloric acid. The expedient of storing chemicals on board ship in close proximity to sleeping apartments cannot be too vigorously condemned, and we trust that a thorough and searching inquiry will be made, and that steps will be taken in future to protect the passengers from such dreadful and avoidable risks. We are apparently living in an age when chemicals have, more or less, become necessities and everyday commodities amongst us. Some time ago we recorded an accident arising from the simultaneous presence of chlorate of potash lozenges and match boxes in the same pocket, and other similar accidents due to chemical reactions on the comparatively small scale of domestic environment have been recorded. It is evident, however, that unless great care be exercised, both on the part of the manufacturers and the public, in dealing with these things they will surely have a forfeit to pay for availing themselves of the mysterious forces locked up in nature which man finds it profitable to release temporarily for his convenience and use. Finally, the increasing employment of chemicals such as compressed gases for public use should, it seems to us, shortly afford subject of special legislation and control.

ROYAL BRITISH NURSES' ASSOCIATION.—The fourth sessional lecture of the season was delivered at 17, Old Cavendish-street, on March 15th before an unusually large audience by Sir Dyce Duckworth, the subject being the Modern Trained Nurse. The chair was taken at 8 P.M. by Mr. Herbert Page. A discussion took place at the conclusion of the lecture on the various points raised of special interest to nurses.

Annotations.

"Ne quid nimis."

THE "SWEATING" SYSTEM APPLIED TO THE MEDICAL PROFESSION.

WE receive from all quarters evidence of a general revolt against modes of medical practice which practically amount to the degradation of the profession and the sweating of medical men. The general revolt of course implies a general evil. In one place the vortex into which all kinds of practice are to be sucked is a medical aid association; in another a club established by a commercial company worked by a layman, who gets so much—perhaps 20 per cent.—on the receipts; in another even the old-fashioned, and in its way honourable, "club" is degraded to wrong uses, and made the medium of meanness to a profession which deserves very different treatment from the working men of Great Britain. Against fair combinations of working men for attaining their own legitimate ends we have not a word to say. They have a right to take this course to procure reasonable wages and reasonable reductions in the price they pay for their prime necessities. Medical attendance is one of these necessities. They are as dependent on this as on food or education. And yet it has a delicacy of character about it which cannot be said to attach to any mere article of trade or to the person who supplies it. It cannot be supplied "in the lump." To be valuable it must be individual to a great extent. The individual patient must be considered, and his relation to the medical adviser should be continuous and individual. All attempts at procuring wholesale medical attendance on crowds are bad for the patient. They are also bad for the medical profession, and the profession has a right to object to them as inconsistent with its own proper conditions of work. It has a right to protest against all terms that would convert it into a mere traffic in drugs and take no cognisance of the fact that its members are not mere retailers of such drugs, but highly educated men, whose responsibility is great and whose judgment is, as a nearly invariable rule, equal to that responsibility. We learn that in Lincoln there is a determination on the part of the profession to resist the abuse of friendly societies, medical aid associations, and the like. We have only two words to say on this subject. The first is to express our hearty approval of the stand made in Lincoln and elsewhere. The second is to impress on medical practitioners there and in other places that victory over these evils depends entirely on themselves. The profession in each place must do its own duty. The General Medical Council has, perhaps unfortunately, resolved after full investigation that the evils are not such as it has power to deal with. After all, the profession must look to itself and to its own dignified and effective action in each particular locality for success. If the older and the younger members of the profession in friendly discussion arrive at clear views as to the real significance of these evils and loyally support each other in resisting them the result will soon be apparent. We cannot believe that either working men or the honorary members of friendly societies will, after due notice, allow these institutions to be used to the detriment of a profession to which they owe so much.

THE QUESTION OF THE COMMUNION CUP.

WHEN the story of the sanitary progress of the present century comes to be written it will be incomplete if it does not lay stress upon the fearlessness with which the reformer waged war against possible sources of infection in places where at a period not so very remote from his own mere criticism would have been looked upon as little less than sacrilege. A controversy is now being raised in America as to the Communion cup as a source of infection to those sharing in the celebration of this solemn rite. This is not the first time by any means that the dangers which may attend the common use of the chalice in the administration of the Sacrament have been made the object of outspoken comment. With the historical aspects of the case we do not profess to concern ourselves, and with the religious aspects we also do not desire to deal. We shall not be suspected of neglecting the latter or of being callous to the great pain that even the idea that the Communion cup could be a source of danger will give to many if we speak only from a sanitary point of view. The administration of the wine to communicants in separate vessels for each would certainly remove a possible source of danger, and to advise this must seem to the ardent hygienist a counsel of perfection. There is, and it cannot be gainsaid, a possibility of infection in the use of the common chalice, and Moses, that prince of health officers, would probably not have sanctioned our present ritual; but, on the other hand, there seems to be no actually proven example of any serious amount of infection being traced to the use of the common chalice, and the precaution, which should give no offence to anyone, of wiping the rim of the chalice with a napkin after each communicant has placed it to his lips should go far to remove what danger there may be. It should surely be unnecessary for us to urge upon those who have only lately entered upon convalescence from some infectious disease the necessity of refraining from publicly taking the Sacrament until a reasonable period after recovery. Human nature, however, is not only weak, but, alas, thoughtless, and a word of warning is not, we think, likely either to do any harm or to give any offence.

THE INTERVIEWER AND THE MEDICAL MAN.

THE custom of interviewing is growing in this country, and there is no doubt a demand for this kind of information, albeit it must often be of the most meagre and occasionally, perhaps, of the least accurate kind. We are led to this consideration by the perusal, in the columns of a Sunday journal, of the report of an interview with a medical authority on the subject of vaccination. Assuming—as it appears to do—that the report gives an accurate statement of that gentleman's views, we may venture to doubt the advisability of these being promulgated in this form. In the main the opinions he is reported to hold are sensible, straightforward, and justifiable inferences from the facts of the case for vaccination; and it is eminently desirable that they should be brought into prominence. But the subject of the manner in which vaccination is performed, and that of its alleged injurious effects, is hardly one to be treated *ex cathedrâ*, and cannot but open the door to much unprofitable controversy when dealt with so summarily. Amongst the various aspects of the question submitted to the Royal Commission—which has at length resumed its sittings for the purpose of considering its report—there is none which has been more carefully inquired into than this; and we do not doubt that the consideration of the avoidance of all risks as well as the safeguarding of the efficient performance of vaccination will take a prominent place in the long anticipated recommendations that may be made by the Commission. The misfortune of this whole question of vaccination is that it has opened the door to the discussion of strictly technical topics in pathology and therapeutics by those who have had no scientific training and are unable to appreciate the value of scientific evidence. The art of the interviewer is to seize on questions of the day and to give the opinions of experts upon them in a form capable of being

understood by the people; and, seeing how common is the curiosity about medical matters, it is not surprising, although it is none the less regrettable, that the "medical interview" is growing in favour and extent. As medical questions are seldom simple—indeed, often most complex—there can be no two opinions upon the inutility and harmfulness of the practice.

AN ANATOMICAL CURIOSITY.

DR. J. W. OGLE has recorded in the twenty-ninth volume of the *Journal of Anatomy and Physiology* an interesting example in which one of the roots of the left hypoglossal nerve passed through the left vertebral artery within the skull. An excellent drawing is reproduced, but the specimen itself was not preserved. We had almost thought, with Dr. Ogle, that the observation might have been a unique one, for although nerves passing through bones in early development (as, for instance, one of the supra-clavicular nerves passing through the clavicle) are well recognised, nerves passing through bloodvessels, especially arteries, are very rare. Instances are known of the internal anterior thoracic nerve passing through the axillary vein and of the nerves at the bend of the elbow passing through one of the veins at that point; and the nerves passing into the thorax occasionally obtain a passage through the large venous trunks. It is therefore very remarkable that the only other instance of the passage of a nerve through an artery that we can find recorded is by Otto, who mentions a wax model in the anatomical museum of the Joseph-Academie in Vienna, where the hypoglossal nerve also ran through the vertebral artery. The same nerve and the same artery are involved, and it is very curious that such an anomalous development should apparently be thus limited.

METROPOLITAN DISTRICT RAILWAY FARES.

A DISCUSSION which has naturally awakened considerable interest among Londoners has recently arisen concerning some of the fares charged by the Metropolitan District Railway Company. It is alleged that the company has made a practice of charging rates in excess of the limits imposed by the statute under which it carries on its operations, and aggrieved passengers have very naturally made the charge the subject of complaint. We should have supposed that any such infraction of the law would easily be restrained by the Railway Commissioners if the point were proved, and in such a case it is very odd that any serious difficulty should exist about invoking their intervention or placing before them the necessary statement of the case. But however that may be, there are broader considerations to be taken into account in forming an opinion upon the merits of a controversy such as this than the mere letter of a statute thirty years old. The enormous growth of the traffic in the heart of London and of the residential districts on its borders which has taken place during the last quarter of a century may well be supposed to have revolutionised the conditions under which the transport services in all their various departments are carried on. It is difficult to imagine that the scale of charges fixed in the sixties would now need revision in such a sense as to augment the revenues of a railway company circumstanced as is the Metropolitan District; but on the other hand the change of fashions in the matter of class accommodation has been such that it may well have become desirable to readjust the various rates *inter se*. People who thirty years ago would have considered a first-class ticket indispensable to their self-respect may be found to-day very complacently sharing the improved third-class carriage with their less pretentious neighbours. Things like these have a money value when they are regarded from the point of view of the railway manager, and it would be well both for the critics of the companies and their champions to bear in mind that the terms under which such a service as that which a great railway company supplies is to be undertaken and conducted must in the nature of things be subject to frequent revision, although invested for the moment with the sanctity of the law by Act of Parliament.

COUNTY HOSPITALS AND THEIR MEDICAL STAFFS.

THE question to which attention was directed in our columns last week by Mr. Henry Taylor is one of no small interest to the medical profession in county towns. We may say at once that we fully concur with Mr. Taylor in the views he expressed, although they are contrary to the action taken by the governors of the Surrey County Hospital. It is clearly absurd to contend that, as the hospital is a "county" one, therefore its medical staff should be drawn from other towns than that in which the institution is situated. That the staff appointments should be regulated by the subscription list of residents in various parts of the county is absurd, unless those thus appointed be merely consulting rather than acting medical officers. Apart from the practical inconvenience arising from medical officers living at a distance from the sphere of their hospital work, the general introduction of this principle of selection would, as Mr. Taylor shows, be quite impracticable. Guildford is the county town, not Godalming; and naturally, therefore, Guildford is the seat of the county hospital. It is not claimed that Godalming is ill-served by the hospital; and that its medical men feel a grievance at not having the hospital appointments, which form one of the compensations of a practice in a country town, is surely not the case. The idea probably arose in the minds of some of the influential and active governors dwelling in the charming neighbourhood of Godalming, who, perchance from their attachment to the place, have lost sight of the fact that, after all, Godalming is not Guildford.

INSTANTANEOUS SURGICAL ASSISTANCE.

UNDER this title Dr. Marcel Baudouin has published an interesting report of the plans which he has drawn up for providing the best possible aid at the shortest possible notice at the coming Exhibition of 1900 in France. The necessity of such organised assistance has been shown over and over again by the numbers of accidents which occur in all large exhibitions, both during the building of an exhibition and while it is open. At the Chicago Exhibition the daily number of cases requiring medical or surgical treatment was very great, and on two special days—viz., Oct. 21st and 22nd, 1893—no fewer than eighty-one cases required attendance in one form or another, and the experience gained at Chicago has helped Dr. Baudouin in the formation of his plans for future services. A hospital is to be built in the grounds, and from this as a centre outlying posts are to work. It is proposed to have ambulances stationed in different parts of the exhibition, which can at once be called to any locality by means of telephonic arrangements distributed over different parts, just as fire-engines in London are summoned to a fire. By this means any part of the exhibition can at once get an ambulance, and the injured be given "first aid" and then taken to the hospital. The hospital is to be built in as an advantageous position as possible for receiving patients from any part of the exhibition, and will thus form the centre of the whole system. It is to contain twenty beds, distributed over ten rooms, each room containing two. Four of these rooms are to be given up to surgical beds (two male and two female) and four to medical, while the two remaining ones are to be, if possible, rather larger than the others, and reserved for obstetric and gynæcological cases and for any young children whom it may be desirable not to put in the adult wards, and for this purpose each of these rooms is to

contain a cot in addition to the other beds. An operating room, with adjoining anæsthetic room, is to be built, and is to contain every modern surgical appliance, and there are also to be well-ordered rooms for receiving cases when they first come in. The medical and surgical staff is to consist of a resident surgeon, in command of the service, one non-resident assistant-surgeon, and one non-resident assistant-physician. In addition to these, there will reside in the hospital an assistant in medicine (also a bacteriologist), two surgical assistants, and a dispenser. There is also to be an efficient nursing and domestic staff in the building. It is proposed to raise the necessary funds by taxing the employers of labour according to the value of the constructions they erect in the exhibition, the necessary taxation being estimated at about 5 fr. per 1000 fr. Such a complete system for saving life and limbs will necessarily be an advantage to large employers who are responsible for the lives of the men they employ, as well as to the injured themselves, and it is to be hoped that the authorities will see their way to carry out Dr. Baudouin's carefully worked-out scheme.

SANITARY INSPECTORS AND TENURE OF OFFICE.

A DEPUTATION of the Sanitary Inspectors' Association was introduced on Friday last, by their President, to Sir Walter Foster, M.P., Parliamentary Secretary to the Local Government Board. A full report of the meeting will be found in another column, but we may here note that the deputation, which was very numerous, had for its object the task of bringing before the Secretary the question of the tenure of office held by the inspectors. Their President, Sir Benjamin Ward Richardson, urged that at present sanitary duties could not be properly performed by inspectors unless they were preserved from the danger of dismissal if they independently and faithfully fulfilled their duties in the removal of flagrant causes of disease. He gave an instance in which an able sanitary inspector, who had been for thirty years engaged in the work of inspection, had been peremptorily removed from his duties and left unprovided for, owing to the circumstance that the district in which he had laboured so long had been divided by the county council and that new inspectors were introduced, leaving him altogether unprovided for, without a pension or provision for the future; so it sometimes happens that the man who is most useful is in the most dangerous position of all. Several sanitary inspectors supported their President by details of facts which they themselves had directly observed, and Sir Walter Foster, in his very practical and excellent speech, spoke strongly in their favour and in the direction of their views. He did not admit that sanitation could not be carried on with considerable effect under existing conditions; and he pointed out a series of facts showing that an improved sanitation has led greatly of late years to the reduction of disease. This, he said, was specially marked in regard to the suppression of cholera in this kingdom. He referred to the epidemics of the disease between 1832 and the last epidemic which has appeared, showing that there had been a proportionate decrease of mortality and of cases affected according to the increase and spread of sanitary principles and practice. On the last occasion, in fact, cholera, after being introduced into this country, had been stamped out with a facility which could scarcely have been expected, and which could not have occurred in any other country where the sanitation was less perfect. At the same time sanitation still admitted of improvement, and the fixity of the tenure of office of sanitary inspectors, with an increase of salary for their services, would without any doubt tend largely to this end. Unfortunately there was at this time no Act of Parliament which permitted of such tenure, and he could hold out no hope that this session there would be any legislation that would bring about what was asked for; but if at any time such legislation were attempted he would bear in mind the request in the most favourable manner he could. Meantime, he trusted that county councillors themselves, who had taken upon themselves the task of local self-government, would be wise enough to lead the way to the necessary reform by improving the salaries and making safer, and therefore more useful, the term of office amongst those who were so willing to serve them in the performance of what was often a delicate and hazardous duty.

APHTHOUS FEVER.

SOME alarm seems to have been caused in this country by a report from Berlin that "a new epidemic" has manifested itself in the south-western parts of that city, of which blisters in the mouth are the most characteristic feature. It is also stated that Professor Virchow regards the malady as the human form of bovine foot-and-mouth disease, induced by consuming the milk of affected cows. There is nothing at all surprising in this occurrence, as the aphthous or eczematous fever of animals known as foot-and-mouth disease is communicable to mankind, chiefly through the ingestion of uncooked milk from cows whose mammary glands are involved in the eruption. Innumerable instances of this transmission, experimental as well as accidental, are on record, and many have happened in this country when the disorder was prevalent, which it was for nearly half a century. Now, however, we are happily free from it, and it is not likely we shall ever see much of it again so long as we keep a sharp look with regard to the importation of cattle. On the Continent it is constantly present in some region or other, and at times is universally prevalent, so that it is not at all startling or wonderful to hear of people suffering from it when no precautions are adopted to render the milk innocuous.

DEATH UNDER CHLOROFORM.

WE are indebted to the house surgeon of the Royal Victoria Hospital, Bournemouth, for the substance of the following account of a death under chloroform. The patient, a man aged forty-three years, was admitted into hospital suffering from a transverse fracture of the patella during November of 1894. On admission his general health was fair, although there was unduly marked arcus senilis, and a history of intemperate habits. The patella was cut down upon and united by wiring. On this occasion chloroform was given from a Skinner's mask, upon which the anæsthetic was sprinkled from a graduated drop bottle. The stage of excitement was unusually pronounced. The inhalation took over ninety minutes, and twelve drachms were used. No unusual symptoms occurred. Recovery was not delayed, and only slight sickness followed. On Jan. 4th, 1895, a further procedure became necessary to remove the wires, and chloroform was again given, a Skinner's mask and drop bottle being employed. About a drachm was sprinkled upon the flannel, when violent struggling took place, the patient raising his head about two feet from the couch. Another drachm was sprinkled upon the flannel and the patient ceased to struggle. He appeared to go under in the ordinary way, his breathing being deep and regular. The corneal reflex was discovered to be absent, and the operation was about to be commenced when the respiration became altered in character, two or three deep, prolonged breaths being taken and then all breathing suddenly ceased. There was neither pallor nor cyanosis. No radial pulse could be felt after the failure of respiration. The usual restorative measures—artificial respiration, injection of ether beneath the skin, depression of the head, and extension of the tongue—were unsuccessfully employed. The necropsy revealed

fatty degeneration of the heart and kidneys. Those present expressed the opinion that death was occasioned by primary heart failure, predisposed to by the diseased condition of that viscus. It is pointed out that the violent struggling which took place during the anæsthetisation probably crippled a heart predisposed to syncopal attacks. There does not appear to be any reason why this patient, who was known to be an alcoholic subject and therefore prone to degenerative changes, should have been given chloroform. During the first operation he struggled, and presumably a like state of things would occur again; under these circumstances we doubt whether chloroform, which was likely to depress the vital processes and place the patient in grave danger, was the best anæsthetic. The preparation, the choice, and the management of the anæsthetic, however, often tax the resources of the most experienced chloroformist and confront the less expert practitioner with a problem the solution of which he may well fail to discover without any blame being incurred by him.

TWO SUPERNUMERARY TESTES.

SUPERNUMERARY testes are notoriously very rare. A case was recently reported to the Clinical Society of London. It is less remarkable than one reported in the *New York Medical Record* of Feb. 23rd. The case was noticed first by Lieutenant Alex. M. Davis, recruiting officer of the Eighth Cavalry, who took it to be a case of one superfluous testicle. On taking the recruit to a physician the latter found him to have four testes. Three were on the left side of the scrotum and one on the right. They were all apparently perfect testicles, and gave the peculiar pain incidental to pressure. Three were large and well developed, and one situated high up in the scrotum was small. There appeared to be but two spermatic cords, though the two large testicles on the left side seemed to be connected by a subsidiary spermatic cord.

BISKRA.

IN the *Fortnightly Review* Major Arthur Griffiths gives some interesting information regarding a health resort to which we have more than once referred in our columns, but about which there is little accurate or precise knowledge. The place in question is Biskra, situated in an oasis beyond the Algerian mountains, and on the verge of the Sahara. Major Griffiths is disposed to think that the attractions and virtues of Biskra have been unduly magnified, but, in spite of some drawbacks, he gives a verdict of qualified approval. He writes from personal knowledge and from recent experience. The two special advantages of Biskra are "climate and comparative propinquity." As regards climate, Sir Lambert Playfair, a competent authority, says: "The climate of Biskra is delightful during six months of the year. Nowhere in Algeria can we find a more genial temperature, a clearer sky, or more beautiful vegetation. It is practically rainless; the only drawback is the prevalence of high winds." Other authorities speak in even stronger terms, and it is claimed for Biskra that it is comparatively free from that chill at sundown which is the bugbear of so many otherwise fine climates. The winds, however, would appear to be a serious drawback. They are often very tempestuous, blowing almost with the force of a tropical typhoon, and when they come from the north and pass over the snow-capped Atlas Mountains they are apt to be bitterly cold. The storms at Biskra differ in one important respect from those of Egypt—viz., they do not raise the vast quantities of dust familiar to the traveller on the Nile, the reason being that the desert surrounding the oasis is mainly hard and stony. The hotels and houses at Biskra, being built with a view to protection against heat, are not well adapted to withstand these storms and are very draughty during their continuance. Still, the air is very fine; it is "dry, often warm, always invigorating, with a certain fine champagne-like quality of briskness, which, without being too stimulating or exciting, makes it delightful simply to breathe." As regards propinquity to England, Biskra has a considerable advantage over the resort most analogous to it in point of climate—viz., Upper Egypt. "The railway journey to Marseilles is the same in both cases; then four days remain for the sea voyage to Alexandria, against twenty-six to twenty-eight hours to Algiers, or thirty to Phillipville. Again, the desert of Sahara is certainly much nearer the Algerian seaboard than are Luxor and Assouan, with presumably parallel climates to Alexandria." The journey by rail from Algiers to Biskra is 400 miles, and a night must be spent *en route* at Setif, where the accommodation is described as inferior. From Phillipville the journey is only 200 miles, and can be made in one day, but against this great advantage must be set the serious drawbacks that the Compagnie Transatlantique do not run their best boats to Phillipville and that the hotel accommodation there is only third-rate. On the whole Major Griffiths is inclined to recommend the route *viâ* Algiers. The attractions of Biskra, beyond its admirable climate, do not seem to be numerous or great. The hotels are fairly good, but the *cuisine* suffers from inevitable monotony. There are gardens, a casino, a curious market, a negro village, the baths of Salahin, and neighbouring oases which may be visited. The sportsman, "if he is enterprising and fairly hardy, enough so at least to face the trials of tent-life, will be rewarded by good bags of gazelle, bustards, hares, snipe, and, in the proper season, quail." The supply of horses is not very good, and the prices demanded are often extortionate. In the matter of antiquarian remains, although Algeria is far behind Egypt, it is nevertheless very interesting. "At no great distance from Biskra are the famous Roman ruins of Thimegad, the ancient Thamugas, second only to those of Pompeii, and in excellent preservation. Near it is Lambessa, the city of the third Augustan legion, another Roman remain which would well repay the visitor, but neither Thimegad nor Lambessa can be approached without great pains and fatigue, with a night's lodging at the indifferent hotel of Batna thrown in."

THE CARDIAC PLEXUS IN DIPHTHERITIC PARALYSIS.

IN the *Archives de Médecine Expérimentale et d'Anatomie Pathologique* Dr. A. Vincent has written a paper in which he strongly controverts the current view that in convalescence from diphtheria myocarditis is the only condition which leads to cardiac failure. Another view, that this condition is the result of an affection of the vagus or sympathetic, is not favoured by the exceedingly slight changes which are found in those nerves. The myocarditic theory, on the other hand, is contradicted by various observations in cases of patients dying in the course of convalescence from diphtheria in which no affection of the heart muscle was present. Dr. Vincent quotes such a case, which he had himself observed and examined, and he expresses the opinion that the reason why the cardiac failure has not been ascribed to its true cause is because only the nerve trunks have been examined, while the state of the cardiac plexus has been overlooked. In confirmation of the importance of carefully examining this he quotes the case of a man who died from cardiac failure after diphtheria, and in whom a careful examination of the medulla, spinal cord, and vagus and sympathetic revealed no abnormality. In the plexus cardiaco-aorticus, however, there were widespread parenchymatous changes differing in degree in different parts, while in the muscle fibres of the heart the transverse striæ were well retained as a rule, and only in a few were they indistinct or absent. In the cardiac plexus also similar changes to those above described

were found—i.e., changes exactly analogous to those found in the peripheral nerves in post-diphtheritic paralysis. Dr. Vincent accounts for the fact that the trunk of the vagus was not affected by supposing that the course of the disease was so rapid that death ensued before the changes in the trunk of the vagus could manifest themselves. The changes in the plexus were severe and quite out of proportion to the affection of the myocardium, and there could be little doubt that the former were the cause of death. This observation of Dr. Vincent, together with one by Dr. P. Meyer, are said to be the only ones in which the cardiac plexuses have been examined; but the very definite changes described by both observers make it desirable that future observations should be directed to the elucidation of this point.

DEPRIVATION OF DEGREES.

THERE is good reason to hope that universities will soon acquire a similar power to that possessed by corporations of expunging the names of those of their members who have been guilty of conduct unworthy of their position. It will be remembered that at its last meeting the subject was brought to the notice of the General Medical Council in a motion by Dr. Glover. The motion was withdrawn after a satisfactory discussion, in which the representatives of universities showed every disposition to consider their duty in this respect. We now understand that the Council of the Senate of the University of Cambridge recommend that the following new statute for the University be made as to the deprivation of degrees—viz.: If the Chancellor of the Sex Viri, or four at least of their number, of whom the Chancellor shall be one, shall report to the Council of the Senate that it has been proved to their satisfaction that a graduate of the University has been convicted of a crime for which he has been sentenced to penal servitude or imprisonment, and that such crime is one which renders him unfit to be a member of the University, that the Council of the Senate may propose to the Senate a grace depriving him of his degree or degrees, and of all privileges enjoyed by him as a member of the University, and in case the grace be approved by the Senate he shall be deprived accordingly. The Convocation of the University of Durham has lately ordered the removal from the calendar of the University of the name of one of its medical graduates who had been found guilty of felony.

THE CORONER FOR CHESHIRE.

MR. HENRY CHURTON, the medical coroner for the division of Cheshire which includes Birkenhead, is the premier coroner for England and Wales, having celebrated his jubilee as coroner several years ago. He fought a most plucky fight against his legal opponent, and was successful. During his long career many changes have occurred, involving increased duties, and Mr. Churton accomplished all these with credit to himself and advantage to the community. Though past four score years, Mr. Churton possesses excellent health and has a commanding presence. It is all the more to be regretted, therefore, that he should bring a prejudice to his profession and office by an excessive irritability of temper. Not long ago he was taken to task by Mr. Justice Wills in the Crewe murder case, in which two youths were charged with the murder of their father. For very cogent reasons the police authorities declined to produce the prisoners at the inquest, which so ruffled the coroner, who evidently regarded it as a slight upon himself, that he sent no depositions to the trial, a proceeding which was condemned by Mr. Justice Wills and was noticed in THE LANCET at the time. More recently he acted with discourtesy at an inquest he held at the Clatterbridge workhouse. The jury had walked a considerable distance, and, the weather being extremely inclement, naturally asked if they might be allowed the use of a conveyance or conveyances home. Without any expression of sympathy he sharply intimated that he could do nothing for them, and that they must find their way home as well as they could. In another case he was discourteous to a solicitor who represented the Society for the Prevention of Cruelty to Children at an inquest on the body of a child who had died presumably from neglect. In the third case he made such an attack on Dr. Monro, the house surgeon of the Wirral Hospital and Dispensary for Sick Children, that the chairman of the acting committee addressed a letter to the editor of the *Liverpool Daily Post*, in which he proceeded to show that the coroner was himself remiss in not communicating with Dr. Monro and summoning him to the inquest. There is another matter which ought to be noticed. Birkenhead is now a large incorporated town rapidly rising in population—already over 100,000—and in importance. It ought to have its own borough coroner and not remain any longer in the county coroner's district, such an arrangement being the cause of much delay in the holding of inquests and other inconveniences.

THE PSYCHOLOGY OF ANÆSTHESIA.

IN the course of an interesting letter, which we print elsewhere, Dr. Wyld calls attention to the phenomena of mind during partial anæsthesia. While we cannot quite accept as feasible his suggestion that experimental psychology should be studied from evidence derived *quâ* narcosis, we recognise a peculiar interest in the study of such dreams. Dr. Wyld's visions are not singular. He himself draws attention to the frequency with which persons experience such exhilatory phantasms under chloroform and other anæsthetics; and in the "Life of John Addington Symonds" we read: "On Tuesday I was put under the influence of chloroform and laughing gas together" (*sic*). He then details his vision. "I seemed at first in a state of utter blankness; then came flashes of intense light alternating with blackness, and with a keen vision of what was going on in the room round me, but no sensation of touch. I thought that I was near death, when suddenly my soul became aware of God, who was manifestly dealing with me, handling me, so to speak, in an intense personal present reality. I felt Him streaming in like light upon me and heard Him saying in no language, but as hands touch hands and communicate sensation, 'I led thee, I guided thee; you will never sin and weep and wail in madness any more; for now you have seen Me.' My whole consciousness seemed brought into one point of absolute conviction; the independence of my mind from my body was proved by the phenomena of this acute sensibility to spiritual facts, this utter deadness of the senses; Life and Death seemed mere names ....." Symonds adds, "I cannot describe the ecstasy I felt," and referring to his experience and its psychological evidence, says, "If this had happened to a man in an uncritical age would it not have carried conviction, like that of Saul of Tarsus, to his soul?" There is no doubt, as has been pointed out, that these visions are the product of that kind of enhanced idea formation which occurs as the patient is "going over." At this time the senses are abnormally acute, but the impressions they convey are not true presentments of the physical stimulus received. They partake of the nature of hallucinations. Of course, the anæsthetics now in use are by no means the only drugs giving rise to dreams of elation. Hashish and the more familiar alcohol give psychological evidence of a like character. De Quincey, writing of opium in his "Confessions," sums up the action of alcohol as against his favourite nepenthe: "A man who is inebriated, or tending to inebriation, is, and feels that he is, in

a condition which calls up into supremacy the merely human, too often the brutal, part of his nature; but the opium eater feels that the diviner part of his nature is paramount—that is, the moral affections are in a state of cloudless serenity, and high over all the great light of the intellect." In a similar strain have the victims of cocaine told of its wonderful dreams and soul-stirring visions. The circulatory changes in the nervous system which bring about ordinary dreams in an undrugged person, and the morbid conditions of the nervous system which evolve vision seers and Lourdes miracles, are probably but variants from the states called into existence by the physiological effects of anæsthetics and narcotics—

> "How sweet it were, hearing the downward stream,
> With half-shut eyes ever to seem
> Falling asleep in a half dream!"

ASEPSIS IN CATHETERISM.

A RECENT number of *Przeglad Chirurgiczny*, the Polish surgical review, is largely taken up by Dr. S. Grosglik's article upon Asepsis in Catheterism. Reviewing the methods usually employed for sterilising catheters and bougies, he finds most of them to be unsatisfactory. Bacteriological experiments made by himself showed that neither mechanical cleansing nor the use of liquid antiseptics, sulphurous acid gas or mercurial vapours thoroughly sterilised instruments which had been artificially infected with cultivations of staphylococci and streptococci. This end can only, he affirms, be gained by employing moist heat. Dr. Grosglik describes fully an apparatus, apparently simple and effective, which he has devised for this purpose. In this the instruments are sterilised in five minutes. Elastic instruments, it may be noted, are declared to be unaltered by the process. A useful bibliography is appended to this article.

COUNTRY HOLIDAYS FOR FACTORY GIRLS.

OUR readers will remember Captain Morris's cynical summary of the delights and wearisomeness of the country, but then he lived in Pall Mall, within easy reach of the green trees, ducks, and water of St. James's Park, and there are people in London, who do not live in Pall Mall, to whom the prospect of a visit to the country represents wonders unknown and pleasure untold. It is a physiological maxim that the constant use of one function, if performed voluntarily, will in time produce degeneration of the organs to which that function belongs, and the London factory girl in her daily work is much exposed to this danger. She stands or sits all day in her "shop," and in most cases feeds a machine—an insatiable monster like the daughter of the horse-leech, for ever crying "Give, give," which, whether it be fed with soap, envelopes, sweetmeats, or leather, is always ready for more. Conceive then the rest to the wearied brain and the tired muscles of a week in the country with nothing to do, away from the smoke and the noise of the crowded town, to lie on some warm hillside when the breeze blows off the Surrey heathlands, or, greatest treat of all, perhaps, to see the sea at some place other than Southend on a Bank Holiday. The factory girl is known to most of us only as a person who wears boots with brass eyelets and red laces, an enormous hat with three ostrich feathers dyed in aggressively brilliant secondary aniline colours, and a long black cotton velvet mantle. She is also a lady of unfettered speech and prone to acts which would horrify Mrs. Lynn Linton. But with all this "Lizerunt" and her companions have a great deal of sterling worth in them, and these good qualities are marvellously brought out by the assistance of the excellent society for whom we now plead. The Factory Girls' Country Holiday Fund was started by Miss Canney in 1888, and from its last report which we have just received, we find that by its agency 704 girls and women were sent into the country for periods varying from a week to a fortnight. The average cost is 10*s.* a week and most girls pay a part at least of this. Subscriptions may be sent and will be most gratefully acknowledged by Miss Canney, St. Peter's Rectory, Saffron-hill, E.C., and we commend this work very warmly to our readers.

BLACKMAILING.

THE Wisbech borough magistrates have had before them a charge against Mr. George Bury of Wisbech, house surgeon of the cottage hospital, of assaulting one Fanny Maud Lillian Johnson. The examination was very damaging to the complainant, and the case was dismissed after a very brief consultation. Mr. Bury is to be congratulated, not on the dismissal of the case, which never assumed a serious aspect as far as he was concerned, but on the manly way in which he met the charge. A medical man deserves the thanks of the profession and of all respectable people for exposing such a case.

HEMIPLEGIA WITHOUT BRAIN CHANGE.

Dr. JACOBSON of Copenhagen has an interesting paper on this subject in the *Deutsche Zeitschrift für Nervenheilkunde*, of which an abstract appears in the last number of the *Neurologisches Centralblatt*. He has himself observed six patients in whom, clinically, the usual symptoms of a typical apoplectic attack were present, but careful examination of the brain failed to reveal any lesion except widespread arterial sclerosis. He also collected the records of thirty-two other cases described by various writers, and by a comparison of these with his own cases he finds that the hemiplegia in those patients manifests itself during an illness of some kind, most frequently during uræmia, but also during phthisis, or after pneumonia, lead-poisoning, or puerperal fever. The hemiplegia present is in all respects the same as that associated with a definite focal lesion and is usually fatal soon after its onset. Dr. Jacobson believes that in these cases the hemiplegia depends upon some circulatory disturbance, determined possibly by some inequality of pressure on the two sides of the brain, and that the cases usually end fatally because of the advanced age of the patients and the arterial sclerosis which is present, assisted perhaps by the toxic condition.

THE PRUDENTIAL ASSURANCE COMPANY.

THE magnitude of the operations conducted by the Prudential Assurance Company has long been matter of common remark, and, indeed, the figures annually reported are such as to strike even the most casual observer. With a revenue which aggregates upwards of six and a quarter millions sterling this great institution cannot but be conspicuous, and if conspicuous impressive. But the real significance of these astonishing figures can only be appreciated when it is borne in mind that the great total is produced by the collection of a vast number of contributions which are individually small. Upwards of two-thirds of the whole income is brought to account in the industrial branch—that is to say, represents the thrift of labourers and artisans and the "working classes" generally—and is contributed in weekly pence. Even the premiums which are paid in what is for distinction called the ordinary branch, and which amount in the whole to more than £2,000,000 per annum, even these are for the most part received in comparatively small sums. The Prudential is characteristically a poor man's life assurance company, and for this reason its prosperity is a matter of the very greatest public concern. The extent of its ramification through the humbler ranks of British society will be a matter of no surprise to the majority of our professional readers, being, indeed, pretty constantly brought to their notice in

the ordinary course of practice. But it is on that account the more interesting to us to be able to gather from the report and statement of accounts recently published and circulated that the society continues to enjoy marked prosperity. Nor is "prosperity" in this instance a mere synonym for "popularity." An annual valuation, made on the most approved principles by actuaries of the highest reputation, affords a guarantee for the continuance of this prosperity, with which not only may the members of the society be well content, but which is matter for satisfaction to the public at large, seeing that the scale and character of the task which the directors of this society have undertaken are such as to render its permanent success a matter of national importance.

VACCINATION AND SMALL-POX AT WILLENHALL.

A VERY interesting account of the outbreak of small-pox which occurred in this district during 1894 is given by Mr. John T. Hartill in his annual report. There were in all 842 cases of the disease, 588 being treated at home and 254 in the hospital. The history of 830 cases was traced, and their condition as regards vaccination and small-pox was as follows. Out of 89 which had never been vaccinated no less than 30 paid the full penalty of their own or their parents' neglect of the Vaccination Acts and died; while among 739 cases which at some time or another had undergone vaccination there were but 17 deaths. The remaining 2 cases had had a previous attack of small-pox, but had never been vaccinated. It is thus seen that the death-rate among the unvaccinated was 33·7 per cent. and among the vaccinated 2·3 per cent., or, put another way, the death-rate among the unvaccinated was fourteen times and a half greater than among the vaccinated. Furthermore, it was found that the death-rate among the vaccinated ranged from 4·1 per cent. in those with but one scar to 1·0 per cent. in those with four scars, whilst it was *nil* among the revaccinated. In regard to severity of attack it seems that amongst the unvaccinated the severe cases amounted to 95·5 per cent., as against 26·6 per cent. among the vaccinated. Mr. Hartill supplies other interesting information in regard to the preventive and modifying value of vaccination, and we commend his very lucid account to all those who are prepared to read it in an unbiased spirit.

THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED.

WE have been invited in two quarters to express an opinion upon the society and its working. To be thrifty at one's own expense is praiseworthy, to be so at the expense of another to some perhaps would seem to be still better. The London and Manchester Industrial Assurance Company, Limited, offer to their clients the following advantages: 1. A certain sum at death, varying according to the date of death and the amount of the weekly premium. This, it must be owned, is a very excellent arrangement. 2 Medical attendance and medicine in illness. The medical referee, we observe, signs a paper on appointment, wherein he agrees to examine candidates and sign a certificate, for which he will receive a certain fee—i.e., when the sum assured is under £25 he receives 1*s.*; between £25 and £50, 2*s.* 6*d.*, and so on. In addition he agrees "for the under-mentioned consideration to give and supply at all times when required attendance, medicine, and advice to the best of my judgment to one and all of the said members residing in this district that become my patients ..... the said members to pay for leeches when needed and find their own bottles ..... or be charged extra for the same if found by me. The sum of 10½*d.* per member per quarter to be paid by the company for all members whose names appear upon the list ..... be they few or many." Thus for 3*s.* 6*d.* per annum every member gets medical advice, presumably skilled, and medicine, but not leeches! Now, let us compare the internal economy of a house with that of the body. The house doctor is the plumber and gasfitter. Imagine an association formed whereby a plumber should be induced to sign an agreement that for the sum of 3*s.* 6*d.* per house per annum he would attend whenever he was required to see that there was nothing wrong with the pipes, he himself supplying piping, solder, pumps, gas burners, &c. The inevitable candle required would be supplied by the patient—we mean householder. This would be an exactly analogous condition of things, except that leeches are required less frequently than candles. Provident dispensaries are all very well, being in the nature of charity, but for a big commercial undertaking to make profits out of the sweating of medical men who voluntarily sell themselves into bondage is not consistent with either professional opinion or English ideas of fair play. It will be noticed that the estimate of one of our correspondents whose letter is published in another column—i.e., 2*d.* a week—is too high; 10½*d.* for thirteen weeks is a fraction of a penny per week. The system of touting which he mentions is much to be deprecated, and we must say that, in our opinion, medical men would be wise to dissociate themselves from a society which pursues such methods.

THE BACTERIOLOGY OF GRAVEYARD SOIL.

DR. JAMES BUCHANAN YOUNG, in a paper read before the Royal Society of Edinburgh last year, and which he has now reprinted in pamphlet form, gives the results of some experiments undertaken by him on the chemical and bacteriological condition of soil, with special reference to the soil of graveyards. Samples of soil for bacteriological examination were taken with all due precautions from graves which were being opened for burial, and the examination was made with as little delay as possible. Without describing the methods adopted by Dr. Young or enumerating the organisms discovered, we may indicate here the general results which were arrived at. Dr. Young concludes that the soil of graveyards contains, as a rule, more bacteria than virgin soil; that the bacteria are not most numerous immediately surrounding the coffins, but at some distance above, and that at a short distance under the coffins there is a marked diminution in the number of bacteria present. In the immediate vicinity of the coffins the liquefying bacteria (proteus vulgaris) especially were very abundant. Finally Dr. Young points out that so far as his experiments have gone they tend to show that burial has little, if any, effect in increasing the organic matter in the upper layers of the soil, whereas it has a marked effect on the layers containing the coffins—i.e., at depths greater than four feet or thereabouts from the surface. The organic nitrogen and carbon in graveyard soil are, Dr. Young remarks, by no means so great in amount as is commonly supposed, and he considers that if burial is properly conducted in suitable soil there need be no risk to the health of communities.

COLOUR VISION AND ACCIDENTS.

IN our issue of March 2nd we published a letter from Dr. Gowers asking a most pertinent question—viz, "Has any accident been brought home to defect in colour vision?" To this question no answers have as yet been received, and this is all the more surprising as of late great attention has been paid to the subject. Mr. W. M. Beaumont in our issue of Feb. 9th, 1895, instanced the case of a railway guard who was incapable of distinguishing between red and green, and Dr. W. C. Rockliffe, in our issue of Feb. 23rd, gave a number of instances of colour blindness occuring in the mercantile marine. The deputation of ophthalmic surgeons which waited on Mr. Bryce upon Feb. 1st, and which was exhaustively commented upon

in our leading columns upon Feb. 9th, will be fresh in every one's mind. Thus the existence of colour blindness is an absolute fact, but does it necessarily follow that because a man picks out a grey wool when told to select a green, or an emerald green when told to select a rose, that he cannot tell that there is a difference between a red and a green light, or be conscious which light is shown. Dr. Gowers's desire for information derives additional pertinence from Dr. Rockliffe's paper. In this, it will be remembered, some cases were described of men who were rejected as captains on the score of defective colour-vision, having passed a presumably careful examination for colour-vision for the post of mate. It is important to know the details of the failure which entailed rejection, and also the power of adequate discrimination of red and green lights these men possessed. The point raised is urgent, and the question should be answered without delay. It is all for the benefit of railway and steamship companies that any element of doubt as to the capability of their servants to conduct traffic safely should be set aside, while common justice makes it necessary that rejections should not be capricious or unnecessary. Perhaps a Departmental Committee might be appointed to set this matter at rest.

THE HEALTH OF LORD ROSEBERY.

LORD ROSEBERY continues to suffer very much from sleeplessness, and this is aggravated by any attempt to attend to public business. While at the Durdans he has been out for drives on the Downs to Boxhill and other places in the neighbourhood daily, and has taken short walks in addition, but neither the air nor exercise has proved quite efficacious. Certainly some of the reports of the Premier's condition have been unduly gloomy. Except when wearied and discouraged by a particularly bad night he is cheerful, and has enjoyed the society of the friends who have in turn visited him at Epsom. His fortitude is really remarkable under one of the most trying and wearying conditions known to medicine. Throughout his illness he has never said an irritable word to anyone, and even when most sleepless he resolutely and quietly throws off any depression which he may feel in the early morning. Lord Dufferin has placed Walmer Castle at Lord Rosebery's disposal, who will probably go there shortly, but not until the insomnia has abated. For the present he is advised that he will be more comfortable in his own house.

THE INFLUENZA EPIDEMIC.

THE present outbreak of influenza seems to be rapidly extending, and to be resembling in its far-reaching spread the visitation of five years ago. Thus it has become extremely prevalent in St. Petersburg, in Christiania, Copenhagen, and Berlin, and on the whole its line of spread has been rather from west to east, than at the period referred to, when it may be remembered its rather uniform advance across Europe from the east, led it to be generally termed "Russian influenza." On this occasion England would almost claim the unenviable position of being the starting point for the pandemic. Especial mention has been made during the past week in local newspapers of its great prevalence in Rochdale, in Cheshire, and in North Wales, but in point of fact there is no doubt that it is widely prevalent in almost all parts of the kingdom. Its ravages in Dublin and Newry are referred to by our correspondents in Ireland. The Registrar-General's returns for the week ending March 16th show a diminution in the number of deaths directly attributed to influenza—349, as compared with 473 in the preceding week; whilst there has also been a decline in the deaths from respiratory diseases—viz., from 1366 to 1031, the latter being, however, in excess of the corrected average by 507. The general mortality rates of the thirty-three great towns in England and Wales show mostly a diminution as compared with last week, there being only three towns in which the estimated annual death-rate for the week was 40 or more per 1000—viz., Preston, 40; London, 41·2; and Brighton, 48. The exceptionally high rate at the last-named town, exceptional both comparatively and actually, may perhaps be ascribed in part to the immigration of influenza sufferers to this famed resort for convalescents. In the February summary issued by Dr. Seaton, the medical officer to the Surrey County Council, reference is made to the rapid extension of the disease during that month; including an interesting statement by Mr. Child, M.R.C.S., of New Malden, to the effect that, whereas in January there were 89 cases of influenza in a population of 3437, in February there were 461 in the same population—i.e., nearly one-seventh.

THE DIFFERENTIATION OF OBSCURE THROAT DISEASES.

WE learn from some medical officers of health that considerable help has been afforded through them to medical practitioners having cases of doubtful sore-throats to deal with by reason of the system inaugurated by the Local Government Board of having scrapings or other material from such throats submitted to microscopical and cultural examination. The resulting information is at once telegraphed to the health officer concerned. The conditions under which the material must be sent to the medical officer of the Local Government Board are (1) that it should be transmitted by the local medical officer of health; (2) that it should be accompanied by a clinical history of the case; and (3) that when once the disease in question is ascertained to be diphtheria no more cases from the same locality and outbreak shall be submitted, it being then the duty of the local authorities to deal with subsequent cases as diphtheria.

THE Samaritan Fund of the Westminster Hospital is in urgent need of assistance, and an appeal is now being made for help to carry on the work. The almoner of the fund or the secretary of the hospital will be happy to supply information or receive contributions.

THE *Times* of March 21st states that a compulsory winding-up order has been made against the "Medical Electrical Institute (Limited)," which in October, 1894, was formed to take over the business of the Medical Battery Company (Limited).

MR. THOMAS SMITH, senior surgeon to St. Bartholomew's Hospital and a late Vice-President of the Royal College of Surgeons of England, has been appointed Surgeon Extraordinary to the Queen in the room of Sir William S. Savory, Bart., deceased.

MR. HERBERT W. ALLINGHAM, late demonstrator of anatomy at St. George's Hospital, was elected on Monday last to the vacancy on the staff of that institution as assistant surgeon.

HASTINGS AND EAST SUSSEX HOSPITAL.—The annual meeting of this institution was held in the hospital at Hastings on March 12th, the Rev. F. Young presiding. The fifty-fifth annual report was presented, and showed that during the past year there had been 638 in-patients and 3100 out-patients. The total income for the year was £3770 and the expenditure £4126. Under the head of legacies there was an increase of £904, and when these sums were carried to the capital account the result was that the expenditure exceeded the available income by £1355.

Pharmacology and Therapeutics.

PATENT MEDICINES IN AMERICA.

THE movement against the dissemination of nostrums is growing in America. In our issue of March 2nd we commented upon the introduction of a Bill in the Alabama Lower House with reference to their sale. We now learn from the *New York Medical Record* that a Bill has been introduced into the New York State Legislature with the same object; and the *Philadelphia Medical News* says that a Bill is pending before the Legislature of Tennessee to compel all patent medicine manufacturers to publish their formulas. Concerning this the *Chatanooga News* protests as follows: "We desire to enter here our most emphatic protest against this measure. It means a loss of hundreds of thousands of dollars to the State. No reputable manufacturer would think of giving away his formulas in this manner so that anyone who chooses could take advantage of the legitimate secrets of his trade. Before they would divulge these secrets they would withdraw entirely from the State. The result would be that the druggists, a large part of whose trade lies in patent medicines, would be deprived of a principal source of their income, the railroads would lose immense amounts of freight, and the newspapers would be almost ruined. The advertisements of patent and proprietary medicines constitute a very large part of every newspaper's business, and many of the country weeklies would have to suspend publication if it were not for this patronage. The day has passed when the best physicians refuse entirely to prescribe these remedies. Most of them find occasion at times to use them in their practice. The really skilful doctor is not injured. The people are not imposed on to any large extent. They soon discover what is fraudulent and what is of genuine merit. The Bill can help no one but physicians who have not the ability to command practice on their own merits, but who hope by this means to compel patients to call on them." "The people are not imposed upon to any large extent." What refreshing candour. The *American Druggist* says that druggists are so no longer, nor are they apothecaries, but "prescription specialists."

FLUORIDE OF SODIUM IN INFANTILE TUBERCULOSIS.

The Brussels *Journal of Medicine, Surgery, and Pharmacology* reports some observations of Bourgois to the following effect. In the course of some experiments in the treatment of pulmonary phthisis by inhalations of hydrofluoric acid he was struck by the following facts. A woman whom he was treating by inhalations used frequently to bring her child with her. This child, who was afflicted with spinal caries, but without any chest lesion, used to sit with its mother in the inhalation chamber, and after some sittings its weight had increased from 14½ kilos to 19 kilos. Other children affected with non-pulmonary tuberculous lesions treated in the same way showed a similar improvement. Bourgois then took to administering fluoride of sodium by the mouth. The cases selected presented various tuberculous troubles—chronic bronchitis, otitis, and conjunctivitis—and all had a tuberculous family history. Under the fluoride treatment they all improved notably—an improvement which has persisted. Bourgois concludes: (1) purified fluoride of sodium has a marked action upon children, whether they only have a tuberculous diathesis or are already tuberculous, and the good results are enduring; (2) the dose is from $\frac{1}{10}$ milligramme to 5 milligrammes a day; (3) when the specific effects of the remedy manifest themselves the dose is lowered; and (4) children take the drug very well and hardly ever show any intolerance.

SULPHATE OF COPPER AS A BLOOD-FORMER.

The *Répertoire de Pharmacie*, quoting from the *Rundschau für Pharmacie*, recommends the use of sulphate of copper as far preferable to iron in anæmia. Cervello, who reports the case, gave it twice a day immediately after food in doses of 2 to 6 centigrammes = ½ to 1 grain.

SUGAR AS A UTERINE STIMULANT.

Modern Medicine says that Professor Bossi of the Obstetrical and Gynæcological Clinic of Genoa, Italy, has been experimenting with ordinary cane sugar as an oxytocic, and reports that sugar in doses of one ounce dissolved in eight ounces of water is an effective oxytocic, acting usually within a half hour after its administration. Usually a single dose is sufficient. In extreme cases a second dose, administered at the end of two hours, was found effective. The advantage claimed for sugar as a stimulant in labour is the fact that it does not produce tetanic contractions and does not cause retention of the placenta. These observations seem to agree with physiological experiments made within the last year or two, which indicate that the ingestion of sugar is followed by immediate and considerable increase in muscular energy.

THE PHYSICIAN'S VADE MECUM.[1]

This is an attempt to compress the arts of medicine and therapeutics into an oblong duodecimo of 500 pages, but like all these kind of books it is either too big or too small. Hardly anything is said about spinal nervous disorders except that some half dozen prescriptions are given for paralysis, but in most of them we are not told under what circumstances they are to be used. Thus a prescription containing iodide of potassium is given for lead poisoning, and one so remarkable that we quote it in full. "Potassii iodidi, dr. ii.; ext. ergotæ fluidi, oz. i.; ext. nucis vomicæ, dr. i.; tincturæ cardamomi co., oz. i.; syrupi, q.s. M.S. Dose, oz. ss., night and morning. (Due to lead poisoning)." If these directions were faithfully carried out the patient's illness would soon be due to other poisons than lead. Imagine starting with a dose of twenty or twenty-five grains of iodide and twelve or fifteen of the extract of nux vomica. "Syrupi, q.s." may mean anything. Some prescriptions are given for heart disease, but little is said about valvular lesions, or in what form some particular prescription is to be employed. The author notes that the composing was done by the Linotype process; this will perhaps account for "Pharangitis," p. 438. The book teems with inaccuracies—e.g., Hippocrates' facies—that of agony. From this, most people who read it would imagine that "Hippocrates' facies" meant that of acute pain, whereas it does nothing of the kind; and from the rest of the work we should be very disinclined to believe that the author used the word "agony" in its strictly theological sense. A little further on we find "Pott's fracture—fracture of the tibia," a most insufficient definition. The author tells us in the preface that "this little volume has been prepared for the busy physician, pharmacist, and medical student ..... a brief examination of its contents will convey a clearer idea of its nature and scope than any statement could do." We cordially agree with him.

THE HYPODERMIC ADMINISTRATION OF ARSENIC IN LEUKÆMIA.

Dr. S. Rummo strongly recommends[2] arsenic in leukæmia and pseudo-leukæmia, administered hypodermically in the form of arsenite of soda. The ordinary Fowler's solution is painful, not only because of the lavender it contains, but because it is too concentrated. He uses a solution of arsenite of soda of the strength of two grains to the ounce and commences with a dose of one-twenty-seventh of a grain. This dose is gradually increased until, after some fifty injections have been given, nearly half a grain—forty-five hundredths—is reached. Of course, the patient must be very carefully watched during the whole of the treatment, which must at once be stopped on the appearance of any signs of poisoning. According to Dr. Rummo it is necessary to push the drug until signs of intolerance begin to manifest themselves. He thinks that, given in the way above recommended, it is by far the most satisfactory of all the numerous remedies proposed for leukæmia.

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[1] By Sebastian T. Wemmer, M.D., and F. T. Parsons, M.D. Philadelphia: The Medical Publishing Company.

[2] Riforma Medica, No. 98, 1894, quoted in Nouveaux Remèdes, Feb. 8th, 1895.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The eighty-first annual meeting of this charity was held at the hospital in the City-road on March 13th, Mr. Sheriff Hand presiding. During 1894 there were 477 patients admitted, and the attendances of out-patients numbered about 19,000. The drainage system has been entirely renewed and improved at a cost of £2900. The income for the year was £6700, and fell short of the expenditure by nearly £1500, so that a substantial loan had to be obtained from the bankers on account of the exceptional outlay on the drainage works.

THE LOCAL GOVERNMENT BOARD AND THE SANITARY INSPECTORS' ASSOCIATION.

ON Friday, March 15th, Sir Walter Foster, Parliamentary Secretary to the Local Government Board, received a deputation from the Sanitary Inspectors' Association, who represented to him the insecurity of the tenure of office by sanitary inspectors and the meagre rate of their remuneration, and suggested various measures by which their position might be improved.

The deputation was introduced by Sir Benjamin Ward Richardson, and amongst those present were Mr. Thomas, chairman of the council of the Sanitary Inspectors' Association and chief sanitary inspector for Bermondsey, Mr. Alexander, vice-chairman of the council, Mr. Wilkinson of Derby, Mr. Sumner of Wigan, Mr. Jacklin of Maidstone, and twenty metropolitan inspectors. Mr. Hayes Fisher, M.P. for Fulham, also accompanied the deputation.

Sir BENJAMIN RICHARDSON, in introducing the deputation, said:—"Sir, in addressing you to-day as President of the Association of Sanitary Inspectors, I desire to speak with you mainly on two points—firstly, the tenure of their office by sanitary inspectors, and secondly the amount of their remuneration. I should say that this matter has been brought to a crisis by the manner in which Mr. Watson, the sanitary inspector for the Burton-on-Trent district (who is here to-day), has been treated by his board. He was for thirty years inspector of the district, from which he has now been removed. He received in the first instance £215 a year, which was reduced to £175 upon the division of his district in 1888. Now there is another division in his district, with the result that new inspectors have been elected for each division and he is thrown out altogether. He has not been appointed to anything else, and although he knows the district so well, and has worked in it so long respected by everyone, he is, by this action of the county council, deprived altogether of his means of livelihood. This is not a solitary instance, although it is perhaps the most striking. All over the kingdom men are being thrown out in this way. We earnestly hope that some change will be made which will ensure to these gentlemen a respectable living and something in the way of a pension afterwards. I know that it may be said that at the present time the Local Government Board has no power whatever in these matters, and that you are obliged to do what has been done before; but we are somewhat doubtful whether this is the case. We of course accept at once that you have no direct power, but you have negatively and indirectly a great deal of power. But we want you to go further than that. We want you to bring about a change in the Act, so that security of tenure may be given to all sanitary inspectors. This is the only way in which injustice can be prevented. I also speak strongly on behalf of sanitation. Good sanitation cannot take place in England under the circumstances which now exist. These inspectors were originally appointed to assist the medical officer of health in his duties; but as time went on the work increased, and the sanitary inspector now has duties to perform which are not dependent on the medical officer at all. Therefore we think that the time has arrived when not only medical officers but also the sanitary inspectors everywhere should have a more secure tenure of office. We think also that in no case should the salary be less than £200 a year. An inspector who has gone through a proper education and passed an examination should receive a minimum of at least £200, rising to a maximum of £350. (I am surprised that inspectors should think that it ought to stop at £350.) They would then feel that they could perform their duties irrespectively of all personal interests and quite independently. We also think that there should be some retiring pension, which should be calculated on the same basis as other pensions are."

Mr. THOMAS pointed out the difficulties of the position of sanitary inspectors. "We need protection," he said, "in our work for various reasons. Local sanitary authorities are composed of interested persons—men who carry on offensive trades, lodging-house keepers, milkmen, butchers, grocers, &c. There is probably not one parish in England where an inspector does not have to interfere with the interests of some member of his authority in sanitary matters, nor one who can carry out his duties without fear or favour. It is common for us to be threatened by tradesmen, against whom we are obliged to proceed in carrying out the Food and Drugs Act, that they will come on the board and see that we are disturbed from our office. We do not want to be protected when we are in the wrong, but we do want to be protected when we are in the right."

Mr. ALEXANDER, Mr. HAYES FISHER, M.P., and Mr. WILKINSON spoke to the same effect.

Sir WALTER FOSTER, in replying to the remarks that had been made, said:—"It gives me great pleasure to meet you here to-day as the representatives of so important a body of public officers as the sanitary inspectors of England and Wales. There are, I find, some 1600 of you in the country holding these offices at very varying salaries, under very varying conditions of tenure, and also under very varying conditions of efficiency—conditions of efficiency which are, however, I am glad to say, on the whole highly satisfactory and highly creditable to the gentlemen who do their work under so many difficulties and often with very little encouragement. I must say that one remark in the address of your President struck me very forcibly. He referred to the difficulty of carrying out efficiently sanitary work under present conditions—I think he said that it was almost impossible. I do not agree with him in that. I think that, looking at the existing conditions, one may well be surprised that these duties have been so ably carried out as they have been. You have certainly discharged your duties with a marvellous amount of efficiency as regards the saving of public life. This fact struck me particularly when some weeks ago I was looking over the result of this Board's work in reference to the Cholera survey which was undertaken by the Medical Department of this Board before and after the invasion of cholera in 1893. You will remember that in that year this country was placed in a situation of great peril. Although the ports of Western Europe were centres of infection there was during the whole time free intercourse between this country and those ports. Commerce went on as if there was no plague in the west of Europe. The danger was indeed very great, and the invasion threatened to be very fatal. To meet these difficulties we depended entirely on the sanitary service of the country. We had no quarantine and no interruption of traffic. You remember, most of you, that we have had invasions of cholera on two or three occasions previously and that it has been of a very fatal character. In 1849 we lost 53,293 lives, in 1854 20,097, and in 1864 14,378. When in the face of these figures one looks back upon the year 1893 one is struck by this fact—that although cholera did break through our outer line of defence, did get into our country and effect a lodgment in sixty-four places, yet in forty-two of those places the disease was stamped out with a single case and in only five instances did the disease extend beyond ten cases, our total loss being only 135 lives. When one considers that and compares it with previous results it seems to me one of the most marvellous triumphs of sanitation over the spread of cholera in the world's history; and after giving their full share of credit to the permanent officials of this Board, who, from Dr. Thorne downwards, worked most laboriously during the whole period, these results must to a very large extent be admitted to be due to efficient local sanitary work, inasmuch as on that depend the preservation of the purity of our water-supplies and the prevention of contamination air and soil. If this condition of things has so reduced cholera mortality you must have done your work throughout the various portions of the country with great efficiency, and I as a representative of this department would thank you for the efficient manner in which you have done your work during the last few years. The results to which I have alluded may be brought home to you by this fact: if we had had in England in the year 1893 a mortality from cholera in proportion to that of 1864—the least fatal of previous invasions—instead of 135 deaths we should have had 19 965, and thus 20 000 lives were practically saved in that single year by the efficiency of the sanitary service. It is impossible to estimate how much sorrow and want and pauperism were thus averted, and I hope every local authority will learn from this that the truest economy they can practise is the enlightened administration of the Public Health Acts and the placing of their sanitary officials in such a position that they can do their duties fearlessly. You will see that personally I am in sympathy with you and that I appreciate the great results which follow from the efficient discharge of your laborious and dangerous duties. I agree with Sir Benjamin Richardson that the life of a sanitary inspector is undoubtedly as perilous as that of the

soldier. While, however, from these remarks you may recognise that I have the strongest sympathy with you, I want you to bear in mind that we, the Local Government Board, can only go so far as the law will allow us. Your first demand is in the direction of having security of tenure. The law does not at present give you that position, and it would require the passing of an Act of Parliament to give you the security of tenure you desire. I do not see any prospect of time being at the disposal of the House of Commons for the passing of such an Act during the present session. If, however, an amendment of the Public Health Acts is brought forward at any time I shall do my best to support it and shall remember the arguments which have been so ably placed before me to-day. I have no doubt that in so doing I could count on the support of Mr. Hayes Fisher and other members on that side of the House. I wish also to say that, although up to the present time the Local Government Board have been in the habit of recognising appointments for one year only, we have done this on account of the hitherto uncertain areas of local government in this country; but now that the form of government has become settled and the country has been mapped out into more suitable governing districts we shall be in a position to take a different attitude towards this question. The Board are prepared to use their influence (within all proper limits) with the various local authorities to do away with these short-period appointments and to encourage local authorities everywhere to make these appointments for a term of years or, if possible, permanently, believing that, under such circumstances, the duties of sanitary inspectors would be discharged more fearlessly and with much more benefit to the public. The Board are prepared to go thus far without an Act of Parliament, but in course of time I hope an Act will be passed to bring about the changes desired. With reference to the salaries, I find that you are not as a body properly paid. I find that in many cases the salaries are exceedingly small, and I must say that when you suggested £200 as a minimum I could not help contrasting it with the actual state of affairs. I find there are some sanitary inspectors receiving only £5 a year, and some others, even where there is part repayment by the county council, receiving salaries of £10 a year. I fear that in many cases these salaries are not paid with a view to the discharge of onerous duties, but are given for services which are supposed by the local authorities to be nominal, but which you very well know are not nominal and ought not to be. You may be sure that we shall endeavour as far as possible to secure more adequate remuneration for these posts. We have discouraged and raised objections in many instances to these inadequate salaries. But you must remember that the Local Government Board cannot govern and control local matters to the extent which many of you seem to desire; we can never become a strong central authority such as you would like. In the evolution of government in the country more and more power must go to the local authorities; the whole bent and bias of modern development is in that direction, and it is to local bodies, therefore, that you must primarily look for redress. This Board will be a guiding and sanctioning body; it cannot be a constantly interfering one; but I can assure you that you will always have from the Local Government Board such sympathy and help as they can give. The salaries must, of course, to a large extent depend upon the local authorities, though in all cases the tendency of the Board will be to encourage proper and liberal, rather than inadequate, payments for such valuable services as you render to the community. As regards pensions, you must work that question out for yourselves on the same basis as the Poor-law officers throughout the country are now doing. There are Bills now before the House brought in by private members dealing with the question. I direct your attention to them with a view to your getting yourselves included in the scheme. There is a strong feeling against pensions, public opinion being more in favour of salaries being paid at such a rate as would lead to the abolition of pensions; but if the system is to be continued I see no reason why it should not be extended to sanitary officers as well as to other officials. Lastly, with reference to the very hard case of Mr. Watson (for it must be admitted that it is a very hard case), you must, I think, recognise that it is one of those cases in which the Board has no real authority. The statute of 1894 enables local authorities to make these changes in the areas under their control, and gentlemen who are unfortunately in the position of having their appointments renewed from year to year *may be* dismissed by these authorities. But I should hope that local authorities will not forget the faithful services rendered by these gentlemen, and that they will feel that such officers have a moral claim upon them, and that they will not on the sole ground of economy put these claims on one side and use their powers harshly."

Sir BENJAMIN RICHARDSON then thanked Sir W. Foster, and the deputation withdrew.

ALDERSHOT: THE SANITARY AND SOCIAL CONDITIONS.

THERE have been so many rumours and reports concerning the sanitary condition of Aldershot that it will tend to relieve unnecessary anxiety to show what is the actual state of affairs. Briefly, it must be explained that there are two systems of drainage—that of the town and that of the camp. Of course, it would be much better to amalgamate the two; that is a point beyond dispute. The difficulty has been to effect an arrangement between the civil and military authorities and to settle how the expenses should be shared between these two independent and widely different bodies. Aldershot as a town has very rapidly developed of late years. From a hamlet with a few hundred inhabitants it has become a little town with a population of about 14,000. The town, under these circumstances, has the advantage of being built on virgin soil, a soil which has never been contaminated by old cesspools and where sewers were laid down as fast as houses were built. But difficulties have arisen with regard to the disposal of the sewage thus collected. Some twenty years ago the town of Aldershot contracted with a firm for the treatment and clarification of this sewage before its discharge into the river Blackwater; but the method of treatment was not satisfactory. Complaints were made that the river was befouled, and a neighbouring authority lower down the stream entered an action against the Aldershot authorities. They gained their point. Judgment against Aldershot was obtained, and injunctions to restrain from polluting were given. Under these distressful circumstances, the town took the sewage works out of the hands of the contractor, who fortunately made no resistance, but seemed, on the contrary, glad to escape from all the difficulties that had arisen. The town authorities now tried various processes of purification, and discovered that, probably in consequence of the large number of horses at Aldershot, their sewage was stronger than that of most towns, and methods of purification which gave satisfaction elsewhere did not act with sufficient energy at Aldershot. Also there was the fact that not only was the sewage stronger, but that the river is small. Thus an affluent was produced by a lime process which if thrown into a large river would cause no trouble. It was clear, free from colour, and looked pure, but still contained organic elements in solution. A large volume of water and a rapid current would have oxidised this small quantity of remaining impurity, but in the comparatively stagnant waters of the Blackwater a secondary decomposition set in. Lower down, in bends of the river, black deposits were formed which, under the heat of the summer sun, soon became obnoxious. The local authorities, after taking advice, abandoned lime as a precipitant, and have since utilised Gibb's alumina. Cakes of this precipitant are placed at the bottom of a trough and the sewage is pumped up through them. After the precipitation is over the water is thrown on to land. So that the filtration may be more perfect some thirty more acres of land have been purchased. The land slopes; the clarified sewage is discharged on the soil at the highest point, and is collected again at the lowest point in a trench dug some 5 ft. deep near the river bank. On the grounds some root crops and rye grass are grown. In rainy weather as many as a million gallons of sewage have been treated and pumped upon this ground in the twenty-four hours. The average outfall of sewage is from 600,000 to 650,000 gallons per day, and this for a civil population of some 15,000 persons. In spite of these improvements in the treatment of their sewage, some twelve months ago the Aldershot authorities were again convicted by the County Court for polluting the river. Feeling that, under the altered circumstances, this was not a fair judgment, the Aldershot authorities carried the case before the Court of Appeal in London and here they were successful. The Court of Appeal decided that the Aldershot authorities were using the best available means and gave

judgment in their favour with costs. Indeed, according to analyses, the result seems very good. For instance, the analysis made by Professor John Attfield on Jan. 25th last shows that per gallon there were 41·0 grains total solids, 1·68 grains of free ammonia, 0·09 grain albuminoid ammonia, and 5·7 grains of chlorine in chlorides. Professor Attfield adds the following comment: "This sample is in a most excellent condition. Such an affluent may safely be admitted into any stream."

Such, briefly, is the history of the town drainage, so far, at least, as the treatment of the sewage is concerned. When, in the time of the Crimean War, the camp was first built there was no town of Aldershot, no sewage, and no sewage treatment. The military authorities, therefore, had to take this matter in their own hands, and they selected a spot which was to be made into a sewage farm. But the knowledge of such questions in those days was not very great; in any case a most unsuitable site was selected. Instead of a sandy, porous soil, which can act as a natural filter, it is a low peaty deposit, which cannot absorb the large volume of camp sewage it receives. As a consequence a good deal of the sewage is not treated at all, but allowed to escape in any condition. This camp sewage farm has been the great cause of complaint for many years, and it certainly ought to be abolished. For this purpose, and at the instigation of the camp medical officer, the town approached the War Department and suggested that experts appointed by the War Office should meet experts appointed by the town and see if some means could not be devised for united action between the civil and military authorities to drain both camp and town together. This meeting was ultimately held, but the course of action then recommended was not adopted. Nevertheless, the need of some agreement was very pressing and became particularly acute when the old wooden huts were pulled down and replaced by handsome red brick barracks. Negotiations were resumed, but the great difficulty rested in the fact that the military authorities were not ratepayers. They certainly subscribed of their own free will a certain small annual sum towards the town expenses, but the camp is not rated, and if the town authorities undertook to drain the camp they would have to deal with double the amount of sewage. The town authorities stood fast to the principle that they were quite willing to drain the camp if the camp would pay rates; otherwise they must leave the camp to its own devices. This led to interminable negotiations with the Treasury, particularly as it is absolutely impossible to estimate the rateable value of a camp. Rateable value is generally estimated at what rent would be paid to occupy the property in question if it was vacant. But if the 14,000 or more soldiers who live in the camp buildings were all taken away not only would it be impossible to find tenants for their barracks, but the town of Aldershot itself would very soon dwindle and lose the greater part of its inhabitants. However, in spite of all these obstacles a sum has at last been fixed acceptable to both parties, and this annual sum or rate being paid by the War Department to the Aldershot Local Board, the latter authority will take over the drainage of the camp. We may hope, therefore, that the abominations of the camp sewage farm will soon disappear, and there will be no further cause for anxiety on this head. The sewage of the camp will be as carefully clarified as is that of the town. We propose to deal with the subject of Venereal Disease at Aldershot in a future number.

(To be continued.)

PROVISION FOR YOUNG IMBECILES.

AT the quarterly meeting of the Lancashire Asylums Board, held in the county hall at Preston on Feb. 28th, it was announced that the Local Government Board had sanctioned the borrowing of £26,582 for additions and completions at Lancaster, Prestwich, and Whittingham Asylums. It is agreeable to note that a vote of congratulation was passed to Dr. Wiglesworth of Rainhill Asylum upon his restoration to health after a serious attack by a lunatic named Horan, who was afterwards removed to Broadmoor as a criminal lunatic. The chairman, the Rev. T. C. Royds, stated that the West Derby board of guardians had passed a resolution in favour of special provision at the new asylum at Winwick or elsewhere for young persons and children of weak intellect. Mr. H. P. Cleaver, on behalf of a combined deputation of guardians, explained that they had come on behalf of an unfortunate class of the population unable to plead their own cause, and for whom no adequate provision was made in the north of England. The Royal Albert Asylum at Lancaster was practically useless so far as the pauper class was concerned. Neglect of these cases was costly and it was a disgrace to the community that no provision had been made for epileptics. Mr. Cleaver further stated that there were 214 cases in the workhouses of young people requiring special treatment, and it would be impossible to say how many more were kept at their own homes—at least treble the 214, he should estimate. Mr. A. Grey of Lancaster said his recollection was that the seven northern counties contained about 7000 cases, of which over 2000 were in Lancashire. The Royal Albert Asylum provided for about 600 out of the whole seven counties. There were 136 cases in the Lancashire workhouses, and nearly 200 in county lunatic asylums. The chairman said the deputation had made out a very good case for the careful consideration of the Board. Experience showed that only a small percentage of imbeciles and idiots were curable, and he did not think the ratepayers were prepared to spend as a start at least £250,000 for an institution for weak-minded children, besides the cost of maintenance of such an institution. His suggestion as a temporary measure, to supplement the private benevolence, would be that the juvenile idiots in workhouses should be medically examined, and where there was thought to be a prospect of improvement that they should be sent for a probationary period, at the cost of the ratepayers, to the Royal Albert Asylum. Children not favourably reported upon, or returned unimproved, should be kept in isolated wards of the workhouses, with separate airing grounds, so that the other inmates might not be afflicted by their presence and the imbeciles might not learn rough habits. Dr. J. M. Rhodes (Chorlton) said census returns were of no value on this subject, as by personal inquiry in pronounced cases known to himself he had found that not 20 per cent. were returned as weak-minded. The Royal Albert Asylum rightly refused cases of epilepsy, because non-epileptics deteriorated in the presence of epileptics. He would remind the Board that many of these children for whom the deputation had pleaded were girls unfit to resist the temptation of any scoundrel, with results costly to the ratepayers and sadly deteriorating the population.

THE OBSTETRICAL SOCIETY OF LONDON AND ITS "DIPLOMA."

THE following is a specimen of the document in full as given by the Obstetrical Society to midwives who pass their examination.

[COPY.]

OBSTETRICAL SOCIETY OF LONDON.

We hereby certify that ..... has passed to our satisfaction the examination instituted by the Obstetrical Society of London, and that she is in our opinion a skilled midwife competent to attend natural labour.

G. ERNEST HERMAN, M.B., President.
F. H. CHAMPNEYS, M.D., Chairman.
JOHN PHILIPS, M.D., } Examiners.
AMAND ROUTH, M.D., }
M. HANDFIELD-JONES, M.D., }
WILLIAM DUNCAN, M.D., } Honorary
WM. DAKIN, M.D., } Secretaries.

I undertake to abide by all the rules and regulations of the Obstetrical Society with regard to all the duties and conduct of midwives, and to submit to the jurisdiction of its council in the decision of all matters relating to my conduct as a midwife. I further agree that in case I shall be hereafter convicted of any criminal offence or be guilty of any act or conduct which in the opinion of the council renders me unfit or unworthy to hold its diploma, the same may be forfeited by a resolution of the council, in which case I will, on receiving notice in writing of such resolution, to be served either personally or by having the same at my then present or last-named place of abode in the United Kingdom, forthwith give up such diploma to the President or to one of the secretaries for the time being of the society, and I agree that my name may be removed from the Register of Midwives kept by the society, and I promise henceforth to desist from the use of any designation or title implying possession of such diploma. [Seal]

At its recent meeting the Executive Committee of the General Medical Council, replying to a letter from the hon. secretary of the Obstetrical Society asking the General Medical Council to point out in what respect the certificate

of the society of examination in midwifery is a colourable imitation of a legal diploma, resolved: "That the Executive Committee are of opinion that the words in the diploma, 'a skilled midwife competent to attend natural labour,' are open to legal objection, seeing that under the Medical Act midwifery is one of the three branches in which a regular practitioner must pass an examination in order to obtain a registrable qualification. The above-cited words suggest that the holder has a registrable qualification. This both contravenes the spirit of the Medical Act of 1886 and is calculated to deceive the public. Again, the formal character of the document, which is described on its face as a diploma, is fitted to deceive the more ignorant part of the public, that part which most needs protection."

THE HALF-YEARLY REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

BLUE-BOOKS as a rule are not particularly interesting specimens of literature, but the one now under notice is an exception to the rule, especially when we read it in the light of the recent debate on the Navy, during which an honourable member mentioned that the British mercantile marine formed one half of that of the whole world. In this report we find that in the latter half of 1894 13,471 vessels were inspected within the Port of London, of which 81·9 per cent. were British, Scandinavian coming next with 8 per cent. In 266 ships 343 structural alterations were ordered and carried out; 114 were for increased ventilation of crews' quarters and 47 were alterations with regard to water-supply, mainly the substitution of galvanised iron tanks for rotten casks. Of the total number of vessels, 6380 were foreign traders and 6591 coasters. The report recalls the recommendations of the Royal Commission on Labour, whereby the proper amount of cubic space allotted per man was laid down as 120 feet, and compares it with the Merchant Shipping Act of 1894, which re-enacted the old amount of space—viz., 72 cubic feet. This Dr. Collingridge considers quite inadequate. On the arrival of a vessel she is inspected medically in conjunction with Her Majesty's Customs. The total number of vessels medically inspected for 1894 was 1868, and the number of individuals averaged about 100 per day, while as a result of this inspection twenty-seven cases of infectious disease were discovered. All masters are bound to report any case of illness which has occurred either during the voyage or during the stay in a foreign port. During the year 3425 Jewish alien emigrants were inspected at Gravesend, and it is satisfactory to note that they arrive "in a much cleaner condition than formerly," owing to the knowledge that they will be inspected at Gravesend. Another satisfactory result of medical inspection is that owing to the issuing of orders at Gravesend for water-tanks to be emptied if the ship has come from an infected port the practice has been adopted of filling up tanks on this side for the outward and homeward voyage. Since September, 1894, all vessels entering the Medway have been inspected by a medical officer stationed at Garrison Point.

Some few cases of cholera and choleraic diarrhœa were dealt with at Gravesend, and diarrhœa has been made a compulsorily notifiable disease. The other infectious diseases dealt with were chiefly enteric fever and diphtheria. A serious nuisance has been caused by barges carrying dung from cattle ships. It is the habit of these barges to load partly in one dock and then to proceed to another to complete their freight instead of going away at once. Steps have been taken to prevent this.

The Kensington vestry have again commenced to deposit refuse dust at Purfleet, causing a nuisance, but it is expected that an amicable arrangement between the various authorities concerned will soon be arrived at.

The Port hospital is working well, and has been extremely useful. The seizures of unsound food have been about the average. During the year 909 canal boats were inspected, but only three prosecutions were found necessary, and "as a general rule the cabins are cleanly and wholesome."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Broadstairs, by Dr. BRUCE LOW.[1]—The outbreak in question had its principal interest during the visiting season of 1894, but the report on it was only made at the close of the year. Including each of the three subdivisions of the urban district, 31 attacks of diphtheria occurred in Broadstairs between Jan. 1st and Aug. 8th of last year, and in 11 instances the attacks terminated fatally. There were two localised outbreaks—one in the suburban portions of the district and one in the Broadstairs division, but this latter was confined to one establishment. The first outbreak was probably traced to imported infection, for it occurred in the house of a woman who acted as laundress for a convalescent home receiving London children. Eighteen attacks occurred as the result, and 15 of the patients were removed to the isolation hospital, a step which, in Dr. Low's opinion, largely contributed to stay the further spread of the infection. In the case of the second outbreak diphtheria was twice imported into a children's home. Once it was detected, precautions were taken and it was stopped. On the next occasion there was some diffusion of the infection in the dormitory where the patient originating the mischief had slept. But, on the whole, the interest in this inquiry, so far as the general public are concerned, lies in the fact that Dr. Low is able to assert with confidence that the disease was in no way due to local insanitary conditions. He also speaks highly of the sewerage of the place and of the prompt manner in which the existing means of isolation were utilised. The truth is that Broadstairs has a large colony of convalescent children and of poor children who are sent there for their health, and, as a consequence, it runs some unusual risk of imported infection; but the risk is practically limited to the institutions in question, it hardly applies at all to the town generally, and even in the "homes" prompt medical supervision may be trusted to identify any infectious disease that appears and to secure the immediate removal of the sick to the hospital which the town has been wise enough to provide for itself.

On the General Sanitary Condition of Festiniog, by Mr. EVAN EVANS.[2]—This report, by one of the temporary medical inspectors of the Local Government Board, gives a very complete account of the general sanitary condition of this Welsh urban district, which has suffered a good deal by the depression in the slate trade, although at the time of the inspection work seemed plentiful and wages good. The Blaenau villages, comprised within its district, are perhaps those which most call for remedial sanitary measures, these measures being very largely wanted by reason of the evils resulting from the non-completion of a system of sewerage and drainage. The general water-supply is from the Morwyion Lake, but other sources are resorted to because the water supplied by them appears to be clearer to the eye. In this way springs, spouts, and mountain rills afford a supply; but since these sources are often near to privies and privy pits the risks of their contamination is by no means inconsiderable. Streams, too, are seriously affected in several ways. Thus the want of sewerage leads, during periods of drought, to extensive and offensive fouling of small watercourses by liquid refuse; and the form of privy known as a "water privy," so styled because it is built over a stream, constitutes another obvious and grave nuisance; indeed, such a system ought to be regarded as a thing to be prohibited by any sanitary authority. In this district excreta accumulate on the banks of the stream, and when rain falls the decomposing material is swept into the immediate vicinity of dwellings. Many of the principal defects of the populous areas in this district would be remedied if the authority would complete their sewerage scheme, and this has more than once been pressed upon them by their medical officer of health. The bringing in of good water as a public supply has already caused a distinct lowering in the typhoid fever death-rate,

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Grafton-street, Dublin. Price 3*d*.

[2] Ibid., price 9*d*.

and has thus shown the value to health and life of proper sanitary expenditure; but the lesson has as yet been lost as regards other diseases, such as scarlet fever &c., which need to be coped with by means of isolation. No isolation hospital has been provided, and partly by reason of the absence of any such provision diphtheria was recently very prevalent in a part of the district. Mr. Evans's report is an excellent example of a very complete examination into the sanitary conditions and administration of a district such as the one here involved.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6914 births and 6534 deaths were registered during the week ending March 16th. The annual rate of mortality in these towns, which had increased in the seven preceding weeks from 18·7 to 35·0 per 1000, declined again last week to 32·2. In London the rate was equal to 33·4 per 1000, while it averaged 31·3 in the thirty-two provincial towns. The lowest rates in these towns were 15·6 in Norwich, 20·7 in Leicester, 21·3 in Derby, 22·1 in Blackburn, and 22·9 in Hull; the highest rates were 36·4 in Bradford, 37·1 in Liverpool, 40·3 in Preston, 44·0 in Oldham, and 48·0 in Brighton. The 6534 deaths included 302 which were referred to the principal zymotic diseases, against 330 and 339 in the two preceding weeks; of these, 113 resulted from whooping-cough, 52 from diphtheria, 51 from measles, 31 from diarrhœa, 27 from "fever" (principally enteric), 22 from scarlet fever, and 1 from small-pox. No death from any of these diseases was recorded last week in Leicester, Huddersfield, or Halifax; in the other towns they caused the lowest death-rates in Cardiff and Blackburn; and the highest rates in Manchester, Bolton, Croydon, Newcastle-upon-Tyne, and Burnley. The greatest mortality from measles occurred in Plymouth, Bolton, Manchester, and Sheffield; and from whooping-cough in Croydon, Swansea, Liverpool, Gateshead, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the thirty-three large towns. The 52 deaths from diphtheria included 27 in London, 4 in West Ham, 4 in Birmingham, and 3 in Sheffield. One fatal case of small-pox was registered in London, but not one in any of the thirty-two provincial towns. There were 57 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 16th, against 75, 68, and 56 at the end of the three preceding weeks; 12 new cases were admitted during the week, against 19, 8, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1615, against 1658, 1621, and 1619 on the three preceding Saturdays; 133 new cases were admitted during the week, against 152, 143, and 141 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in in the seven preceding weeks from 324 to 1366, declined to 1031 last week, but were as many as 507 above the corrected average. The causes of 98, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, Sunderland, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Blackburn, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 42·8 and 40·9 per 1000 in the two preceding weeks, further declined to 35·1 during the week ending March 16th, but exceeded by 2·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·7 in Aberdeen and 23·2 in Dundee, to 41·4 in Paisley and 45·8 in Edinburgh. The 1014 deaths in these towns included 48 which were referred to measles, 22 to whooping-cough, 22 to diarrhœa, 10 to scarlet fever, 4 to diphtheria, 3 to "fever," and 1 to small-pox. In all, 110 deaths resulted from these principal zymotic diseases, against 115 and 144 in the two preceding weeks. These 110 deaths were equal to an annual rate of 3·8 per 1000, which was 2·3 above the mean rate during the same week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 51 and 72 in the two preceding weeks, declined to 48 last week, of which 19 occurred in Edinburgh, 15 in Glasgow, 5 in Leith, and 4 each in Aberdeen and Paisley. The deaths referred to whooping-cough, which had been 30 and 39 in the two preceding weeks, declined to 22 last week, and included 14 in Glasgow and 4 in Dundee. The 10 fatal cases of scarlet fever exceeded by 4 the number in the preceding week, and included 7 in Glasgow and 2 in Edinburgh. The deaths from diphtheria, which had been 7, 5, and 8 in the three preceding weeks, declined again to 4 last week, of which 2 occurred in Glasgow and 2 in Leith. The 3 deaths referred to different forms of "fever" included 2 in Glasgow, where the fatal case of small-pox was also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 544 and 463 in the two preceding weeks, further declined to 385 last week, but exceeded by as many as 279 the number in the corresponding week of last year. The causes of 67, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 32·7 and 48·8 per 1000 in the two preceding weeks, declined again to 42·4 during the week ending March 16th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 35·3 per 1000, against 26·4 in London and 30·2 in Edinburgh. The 284 deaths registered in Dublin during the week under notice showed a decline of 43, from the number in the previous week, and included 9 which were referred to the principal zymotic diseases, against 6 and 14 in the two preceding weeks; of these, 4 resulted from small-pox, 3 from whooping-cough, 1 from diphtheria, 1 from diarrhœa, and not one either from measles, scarlet fever, or "fever." These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 1·4 in London and 5·5 in Edinburgh. The fatal cases of small-pox, which had been 6, 4, and 5 in the three preceding weeks, declined again to 4 last week. The 3 deaths referred to whooping-cough corresponded with the number recorded in the preceding week. The 284 deaths registered in Dublin last week included 36 of infants under one year of age, and 82 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the very high numbers recorded in the preceding week. Two deaths from violence, but no inquest cases, were registered during the week; and 83, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR RECKITT has embarked for Jamaica on exchange. Surgeon-Major Le Mottée and Surgeon-Captain Hassam have been posted to Aldershot. Surgeon-Captain Duncan has arrived in Malta. Brigade-Surgeon-Lieutenant-Colonels Price and Riordan have arrived home after a tour of service in India and Cyprus respectively. Surgeon-Colonel Maunsell has embarked for Bombay. The following officers have arrived from India in the *Dilwara*:—Surgeon-Majors Bartlett and Semple; Surgeon-Captains Pocock and Reilly. Surgeon-Captain Thacker has been transferred from Aldershot to Dublin.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel William Sparks Martin Price to be Surgeon-Colonel, vice W. C. Robison, retired. Surgeon-Lieutenant-Colonel James Maybury Beamish, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice W. S. M. Price.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the retirement of the undermentioned officers: *Bengal Medical Establishment:* Brigade-Surgeon-Lieutenant-Colonel William Roe Hooper, Surgeon-Lieutenant-Colonel Alexander Bannerman Strahan. *Bombay Medical Establishment*: Surgeon Lieutenant-Colonel John Alexander Howell. Surgeon-Lieutenant-Colonel M. M. Gallwey temporarily assumes Medical Charge of the Mhow district, vice Surgeon-Colonel Gore. Surgeon-Captain A.

Street, having taken over the medical charge of the 1st Bombay Grenadiers from Surgeon-Lieutenant H. M. Moore, the latter is transferred to the Quetta district on general duty. Surgeon-Lieutenants J. G. McNaught and H. A. Bray, A.M.S., shortly expected to arrive in India, are posted to the Bombay Command. Surgeon-Major E. F. H. Dobson, M.B., Civil Surgeon, is posted to the Goalpara district. Surgeon C. O'Connor Hodgens, A.M.S., is, on arrival in India, posted to general duty, Nagpore district. The following postings are made in the Madras Command: Surgeon-Captain B. F. Zimmermann and Surgeon-Captain M. Kelly, A.M.S., to the Southern district for duty; Surgeon-Captain W. Gibbard, A.M.S., to do duty in the Chin Hills Command; and Surgeon-Captain R. L. R. McLeod, A.M.S., to do duty in the Secunderabad district. Surgeon-Major J. C. H. Peacocke is to be Civil Surgeon, Karwar, but to continue to act as Civil Surgeon, Belgaum; and Surgeon-Captain H. C. L. Arnim to be Deputy Sanitary Commissioner, Sind Registration district. Brigade-Surgeon-Lieutenant-Colonel S. M. Salaman, Superintendent of the Yeraoda Central Prison, in the district of Poona, is appointed to be a Magistrate of the Third Class in that district. Surgeon-Lieutenant A. E. Berry, I.M.S., is appointed to be, in addition to his medical duties, the Civil Medical Officer, Falam Chin Hills.

NAVAL MEDICAL SERVICES.

Staff-Surgeon Archibald McKinlay has been promoted to the rank of Fleet-Surgeon.

The following appointments are notified:—Staff-Surgeon R. E. Biddulph to the *Dreadnought*. Surgeons: R. S. Bernard to the *Bonaventure*; J. C. Wood to the *Minotaur*; S. H. Birt to the *Lion*; J. Grant, M.B., to the *Mosquito*; W. Bett to the *Inflexible* (lent); J. Dowson to the *Duke of Wellington*; G. R. McMahon to the *Dreadnought*. Surgeons and Agents: E. B. Cutting at Maudesley, C. F. Rudd at Palling, Bacton, &c.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James William Thornton Gilbert, 1st London Volunteer Artillery, to be Surgeon Captain. Surgeon-Captain Robert Launcelot Sparrow, 6th Volunteer Battalion the Manchester Regiment, to be Surgeon-Major.

VOLUNTEER CORPS.

Rifle: 1st (City of Dundee) Volunteer Battalion the Black Watch (Royal Highlanders): James Samuel Yeaman Rogers, M.B., to be Surgeon-Lieutenant.

THE LATE OUTBREAK OF CHOLERA IN THE JAMSETJEE JEJEEBHOY HOSPITAL, BOMBAY.

It will be remembered that the Government of Bombay instituted an inquiry into the cause of the late outbreak of cholera in this institution, and that the Surgeon-General sent in a very exhaustive report on the subject, in which, however, one point was raised as to its possible cause, which was not thoroughly threshed out at that time. The "Medical Union" of Bombay had, in the meantime, asked the Government for an independent inquiry, and the Government had also requested to be supplied with a further report as to the provision, preparation, distribution, and cooking of the food supplied to the patients in the hospital—the point which the Surgeon-General had raised as affording a possible clue to the cause of the outbreak in question. Our readers will probably be interested in learning the results. The Government of Bombay have replied to the "Medical Union" that they consider further inquiry unnecessary, and, as regards the results of the further investigation into the food supply, we understand that the evidence fails to furnish any conclusive evidence that it was connected with the cause of the outbreak.

PARKES MEMORIAL PRIZE.

This triennial prize of seventy-five guineas and a gold medal for the best essay on "Malarial Fevers: their Causation and Prevention," illustrated as far as practicable by facts personally observed by the writer, has been awarded to Surgeon-Major R. Ross, of the Indian Medical Service. The assessors by whom the prize was adjudged were: Dr. Veale, Dr. Patrick Manson, and Professor A. E. Wright. The essays were eleven in number, and the assessors were unanimous in allotting the first place to that bearing the motto, "Da nobis lucem, Domine," which, on opening the sealed envelope, was found to be the work of Surgeon-Major Ross. The other essays will be returned on application to the Secretary, Parkes Memorial Fund, Netley.

Correspondence.

"Audi alteram partem."

THE MECHANISM OF ACCOMMODATION.

To the Editors of THE LANCET.

SIRS,—Some years ago, by the kindness of my friend, the late Dr. Garrod, while he was prosector to the Zoological Society, I was enabled to compare a great variety of eyes in birds and mammalia. The chief objects of inquiry were the structure of the ciliary muscle, and of the iris, and the shape and size of the lens. I must say that there seemed to be strong evidence in favour of the view that the lens is not altered in shape but in position, and looking back to the idea put forward originally by the great Dr. Young (that the lens alters its shape), it seems that this view was wisely abandoned by him after later consideration. When we recognise the visual powers of the birds and fish, and see how inferior our powers are in comparison with them, I think it well to look into the theory of alteration of shape with greater care than it has yet received.

I am, Sirs, yours faithfully,

March 20th, 1895. ROBERT LEE.

*** We have no doubt the conclusions drawn by our correspondent from his observations will be of value. That there is some uncertainty upon the points to which he refers is clear from the fact that a paper was read by Dr. Tscherning before the Ophthalmological Congress which met at Edinburgh last year on the mechanism of accommodation, in which a new and ingenious view of the nature of that process was advanced and supported by good reasoning; but Dr. Robert Lee should read through the chapter on this subject in the second part of the Physiologischen Optik, of Professor H. V. Helmholtz, and that by Professor Landolt in his Treatise on the Refraction and Accommodation of the Eye.—ED. L.

"THE TREATMENT OF INFLUENZA."

To the Editors of THE LANCET.

SIRS,—Most practitioners will, I imagine, concur with the warning issued by Dr. Burney Yeo and Dr. Moffat against over-treatment in influenza. I have no difficulty in believing that adherence to the principles upon which Dr. Moffat bases his treatment will lead, in the majority of cases, to most satisfactory results; but when he enjoins on his patient the necessity of bearing philosophically the pains characteristic of the initiatory stage of the disease, and offers him only the poor consolation of an assurance that "they will disappear with the fever—i.e., in from one to three days"—I ask permission to join issue. In the numerous cases I have had to treat here in Paris since the first epidemic I have almost invariably been enabled to bring down the temperature and rid the sufferer of his pains in a few hours by the exhibition of four six-grain hourly doses (in cachets) of phenacetin. Should, as is rarely the case, pain and fever continue I prescribe two more cachets at intervals of four hours. At the same time I give every three hours an effervescing draught containing ten grains of potassium nitrate. Complications such as bronchitis must, of course, be treated on general principles, but I should certainly not feel justified in allowing my patient to pass the night coughing when an expectorant mixture with a small proportion of morphia would procure him relief. I have never noticed any ill-effects from this plan of administering phenacetin. Thanks to it, I almost invariably see my patient at my second visit smiling and absolved from the necessity of philosophically bearing what I consider is superfluous suffering.

I am, Sirs, yours faithfully,

Paris, March 19th, 1895. J. H. BARNARD, M.D.

*** We print Dr. Barnard's letter with pleasure. We have received many others recommending highly the use of certain special drugs, old and new. Their publication can hardly be profitable, for it is clear that the limits of a letter are too restricted to allow of the exposition of evidence in favour of any one remedy for any

disease which shall suffice to carry conviction. Moreover, our space is limited.—ED. L.

"THE EAST-END MOTHERS' HOME."

To the Editors of THE LANCET.

SIRS,—You ask questions as to the East-end Mothers' Home which I ask leave to answer: 1. "At what period are patients discharged after confinement?" Fourteen days.—2. "Were any patients discharged who could not be fairly classed as quite well?" No.—3. "Were any patients who were seriously ill sent to their homes?" None.—4. "Or to some general hospital?" One suffering from erysipelas was removed to the London Hospital.—5. "Did any such cases die or only recover after a longer or shorter illness of more or less gravity?" In case above-mentioned, recovered.

I am, Sirs, yours faithfully,

London, E., March 18th, 1895. M. C. CORNER.

ON CERTAIN PSYCHOLOGICAL PHENOMENA ACCOMPANYING THE ADMINISTRATION OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—In the year 1800 Humphry Davy, then twenty years of age, experimented with nitrous oxide and suggested its use in surgical operations as a means of preventing pain, and in his biography we read that the impressions he received while under the influence of the gas induced him to exclaim to Dr. Kinglake, "Nothing exists but thought. The universe is composed of impressions, ideas, pleasures and pains." In the year 1874, while inhaling chloroform as a relief to the agony of passing a small renal calculus, I suddenly experienced the extraordinary impression that my spiritual being stood visibly outside my body, regarding that deserted body lying on the bed. Shortly afterwards I called on three different professional chloroformists and asked them if any of their subjects had ever experienced sensations like my own? In reply one gentleman said, "I have often heard patients express similar ideas." Another said, "I myself have experienced on three occasions, when under chloroform, exactly similar sensations." And the third gentleman said, "My patients have often said that they experienced no pain, but felt as if they *saw* with their inner eye all I was doing during the operations." I was told of a patient who said after anæsthesia, "I thought I had got at the bottom of the secrets of nature." And a dentist told me that many of his patients had experienced similar sensations to those I described.

Now, it is well known that those who have been rescued from drowning have often described their sensations while drowning as being pleasurable and their visions as transcendental. Similarly in the case of anæsthetics. The startling and significant fact is this: that while the body is as if dead under anæsthetics the imagination becomes active and at times exalted. Or, as another friend said to me, "When under chloroform the Platonic ideas came to me that Matter was only phenomenal, while the only reality was that which underlay Matter—viz., its spiritual substance." The object of this letter is to bring before the medical profession these psychological experiences when under anæsthetics; and as in Great Britain there are probably not fewer than 1000 individuals, including midwifery cases, daily placed under anæsthetics there should be an almost unlimited store of evidence to draw from, and thus most important facts may be arrived at as to the construction of an experimental psychology.

I am, Sirs, your obedient servant,

Wimbledon, Feb. 28th, 1895. GEORGE WYLD, M.D.Edin.

"PLEURITIC EFFUSION WITH NEGATIVE PRESSURE IN THE PLEURA."

To the Editors of THE LANCET.

SIRS,—In the case under the care of Dr. Samuel West, published in THE LANCET of March 16th, there are several points of interest, but I wish to refer only to the one described under the above heading. Fluid was undoubtedly present in the chest, and paracentesis was performed twice with an ordinary trocar and long tube. On the first occasion no fluid passed out, the "manometer pressure indicated four inches *negative* pressure of water with half an inch respiratory oscillation," and air passed into the pleural cavity from the outside. On the second occasion, three days later, "the manometer registered a *positive* pressure of four inches and a half of water, with a respiratory oscillation of an inch and a half," and ninety-seven ounces of fluid along with much air were removed. Dr. West regards the existence of a negative pressure of four inches of water with an increasing effusion as "almost inexplicable"; and according to the teaching of most of the text-books I think it may be regarded as not almost but altogether inexplicable. That teaching is to the effect that when any fluid is effused into the pleural cavity it at once exerts pressure on the lung, the heart, and other surrounding tissues, and consequently one is led to expect that when an opening is made into the chest the fluid will rush out. That this teaching is not in accordance with clinical facts has been known since the time of Trousseau, but, so far as I am aware, the problems remained unsolved until Dr. Douglas Powell[1] ascertained and explained the effects of lung elasticity. In health there is a (potential) negative pressure in the pleural cavity, and on the occurrence of effusion this is maintained until the elasticity of the lung is exhausted by its gradual retraction, when the pressure of the fluid becomes positive. Two distinct stages are associated with pleural effusion, the first when the pressure of the fluid is negative and it is held in suspense by the elasticity of the lungs, and the second when the pressure of the fluid is positive, the lung elasticity having been exhausted. In the first stage the introduction of a trocar will not lead to the evacuation of the fluid, but to the entrance of air from the outside, if an opportunity is presented; while in the second stage fluid will flow freely as long as a positive pressure exists. These facts I have frequently verified at the bedside, and Dr. West's case supplies confirmatory evidence. In testing them one further point must be noted—namely, that the patient must be breathing quietly and regularly, for if he cough or hold his breath fluid will be driven through the trocar, whatever the intra-pleural pressure may be, owing to the forcible elevation of the diaphragm and the passage of air from the sound into the retracted lung. As the respiratory oscillation in Dr. West's case was only half an inch during the first paracentesis this disturbing factor evidently did not come into play.—I am, Sirs, yours faithfully,

G. A. SUTHERLAND.

Old Cavendish-street, W., March 18th, 1895.

"THE RAM, THE BULL, AND THE HEAVENLY TWINS."

To the Editors of THE LANCET.

SIRS,—Referring to your Annotation with the above title, which appeared last week, I think the old theory as regards twin calves has been fairly established by modern experience—viz., that if the twins are of different sex the female is sterile though the œstrus and sexual instinct are generally present. Bewick, in his "History of Quadrupeds," 1800, mentions this as a well-authenticated fact and calls the female twin a "freemartin"—a term still used in many parts of the country. Stockbreeders who accept the theory are often unwilling to bring a sterile animal to maturity, whilst many to whom it is unknown overlook the matter altogether, so that extensive evidence is difficult to obtain. Two cases only have come under my own observation, and in each case the female twin proved sterile; but I have repeatedly seen twin calves of the same sex which have eventually both proved fertile. That no such law holds good as regards sheep or mankind is a matter of common knowledge.

I am, Sirs, yours faithfully,

Ballachulish, N.B., March 18th, 1895. W. D. ANDERSON.

"THE REMUNERATION OF THE RESIDENT OFFICERS IN ST. BARTHOLOMEW'S HOSPITAL."

To the Editors of THE LANCET.

SIRS,—I do not quite understand the point at issue under this head, but as one who enjoyed the rare experience of a two years' service as house surgeon at this hospital (my

[1] Lung Elasticity in Health and Disease. Transactions of the Royal Medical and Chirurgical Society, vol. lix., 1876, p. 165.

colleague and friend, the late G. W. Callender, being the only other known to me) I feel it right to assert that 50 guineas were paid in each year to the surgeon under whom we served, and we received from the hospital 20 or 25 guineas per annum, with suitable rooms free. The three or four house surgeons had a housekeeper, and we each lived as we could afford. No doubt the hospital authorities made gain out of us, in addition to our services, by avoiding the payment of inquest fees, they themselves being the parish authorities. The information I derived during my house surgeoncy under the late Mr. E. Stanley and Mr. E. A. Lloyd will ever be remembered with infinite pleasure, and the comparatively small honorarium paid to them will ever be considered a most trivial recognition of friendship.

I am, Sirs, your obedient servant,

North Cliff, Kidderminster, March 18th, 1895. S. STRETTON.

To the Editors of THE LANCET.

SIRS,—I still maintain that a man on the junior staff at St. Bartholomew's Hospital is not much, if at all, more out of pocket than a man on the junior staff of any other hospital with a school. Personally, I think that any resident officer ought to have rooms, commons, light, fire, and beer free during his term, and also a small salary to keep him in clothes and tobacco; but this does not alter my opinion as concerning the parallel between St. Bartholomew's and other hospitals with a school. Personally, too, I should say that the collegiate system ought to be much further carried out. At St. Bartholomew's certain idiotic restrictions that existed in my time at any rate ought to be done away with—perhaps they have been, and the "College" rebuilt. Perhaps when the long-pending removal of Christ's Hospital takes place we may see a collegiate establishment attached to the hospital on the model of one of the Oxford or Cambridge Colleges; but, with all its faults, St. Bartholomew's is a fine old place, and it is not seemly for a former resident to draw depreciatory comparisons between it and other hospitals after he has left. I am, Sirs, yours faithfully,

AN OLD HOUSE SURGEON OF ST. BARTHOLOMEW'S.

March 19th, 1895.

*** This correspondence is now closed.—ED. L.

THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY.

To the Editors of THE LANCET.

SIRS,—I think there must be many of your readers who will agree with me that something should be done to check the baneful influences that the London and Manchester Assurance Company is exercising towards the degradation of the profession amongst general practitioners. I suppose there is no legal reason why a medical man should not attend patients for the sum of twopence weekly, including medicine, if that is the amount of the remuneration at which he values his services, although such can hardly be said to raise the profession in the estimation of the public. But when it comes to touts annoying the patients of other practitioners by pestering them to join the society, I say that surely it is time that the bulk of the profession should by some means be able to stop such practices. The General Medical Council would hardly take action, I am afraid, were facts brought before them. The Medical Defence Union has, alas, its hands full with more legitimate work. I, therefore, appeal to the medical press to use its influence to restrain medical men from association with a society of this class. The South-West London Medical Society—to which I have the privilege to belong—lately passed a resolution condemning the practice of charging fees as low as one shilling or eighteenpence. Its members also passed, amongst others, the following by-law: "That no member of the society should solicit private practice either by public advertisement in the newspapers, by placards, by the public distribution of circulars, cards, or handbills, or *by soliciting by agents.*" Other societies have formed similar by-laws.

I am, Sirs, your obedient servant,

Fulham, S.W., Feb. 25th, 1895. A GENERAL PRACTITIONER.

To the Editors of THE LANCET.

SIRS,—Will you kindly give expression of your opinion in your next issue of the above, in accordance with the orthodox views being presently held by leading members of the profession? Should it be supported by medical men upon the principle of a company or aid association running medical business? Is it a burial club with medical aid thrown in at the expense of the profession? What are the abuses to which it is subject? Perhaps some members of the profession would give their experience upon the latter.

I am, Sirs, yours faithfully,

March 18th, 1895. INQUIRER.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Health of Manchester during the last Quarter of 1894: the Medical Officer's Report.

THE births of 4000 children were registered within the city, and equalled an annual rate of 30·7 per 1000, against 32·4 the corrected average of the December quarters of the previous three years.

Of general sickness treated at the public hospitals and dispensaries there were 10,137 cases, or 780 per week, being an increase of 238 as compared with the last quarter of 1893; 1243 were treated as in-patients, 6718 as out-patients, and 2176 were visited at their own homes. Of infectious sickness 1025 cases were reported to the medical officer of health, against 852 in the preceding quarter, and 960 the average number for the fourth quarters of the previous three years. Severe cases of small-pox were reported during the quarter. In the last quarter of 1893 4 cases were reported, in the March quarter of 1894 there were 16, in the June quarter 195, in the September quarter 64, and, as has been seen, there were 7 only in the last quarter of 1894. In his report for the week ending March 9th Dr. Niven says that no fresh cases of small-pox have occurred here for the last nineteen weeks. Scarlet fever was notified in 725 cases last quarter, equal to an annual rate of 5·57 per 1000 persons living, against 4·25 in the immediately preceding quarter and 3·98 the average rate for the fourth quarters of the years 1891–93. In London the rate was 3·81 last quarter, and in the twelve selected notification towns in this part of England 4·42. In Halifax it was only 0·39, while in Warrington it was 9·50. Liverpool and Salford showed rates of 8·25 and 6·03 respectively. Diphtheria was slightly less prevalent than usual, 114 cases being reported, the average for the quarter being 130. In North Manchester the attacks corresponded to an annual rate of 1·50, in South Manchester of 1·03, and in the old unhealthy "township" it only equalled a rate of 0·71. There was less enteric fever than usual, 147 cases being reported, against 240 the average for the quarter. They were most numerous in the Manchester township, where the attack-rate equalled 1·34 per 1000, and fewest in North Manchester, which had a rate of 0·82, thus reversing their positions as to diphtheria. Whooping-cough and measles do not seem to have been excessively prevalent. In the course of the quarter the deaths of 2631 persons were reported, but after making allowance for the deaths of 70 non-residents this number is reduced to 2561. This equals a corrected annual rate of 19·7 per 1000. The average rate for the fourth quarter for the previous three years has been 23·6 per 1000, so that last quarter the rate was below the mean for the quarter by nearly 17 per cent. Here, again, the old township maintained its reputation, for the death-rate was equal to 24·7 per 1000, while in North Manchester it did not exceed 16·8. Last quarter was marked generally by a low death-rate—e.g., in the thirty-three great towns of the Registrar-General the rate was 17·7; in London 16·6; and in sixty-seven other large English towns with a population of about 3,500,000 the death-rate was 16·7, or 3·0 below Manchester. In Edinburgh it was 19·6, in Glasgow 21·6, and in Dublin 23·5. In rural England and Wales the rate was only 15·5.

Infantile mortality was lower than usual in Manchester. Measured by the proportion of deaths under one year to births registered, the rate last quarter was 162 per 1000, against 178 in the previous quarter, and 180 in the fourth quarter of 1893. North Manchester had the lowest rate, 140, while in the Manchester township it was 182. But according to Dr. Ashby of the Children's Hospital this high rate is much exceeded in certain areas.

In the decline of life, amongst those above the age of sixty-five the death-rate was high. 109·4 per 1000 living at that age, being equal to 98·4 per 1000 in North Manchester, while in the unhealthy district of the Manchester township it rose to 134·8.

Small-pox was the cause of death in one case last quarter, but no fresh cases have occurred for the last nineteen weeks. To the "seven principal zymotic diseases" 251 deaths were referred, equalling an annual rate of 1·93 per 1000 persons living, somewhat lower than the average for the fourth quarter. In the Manchester township it was 2·43 and in South Manchester 1·68 per 1000. The mortality from phthisis in the city generally was equal to 1·74 per 1000, ranging from 1·05 in North Manchester to 2·78 in the township. The deaths from diseases of the respiratory organs, exclusive of phthisis, corresponded to an annual rate of 4·79 per 1000, lower than the average for the quarter by 1·56. In North and South Manchester respectively the rates were 3·53 and 4·38; but in the Manchester township the rate was 6·55 per 1000.

Dr. Niven again regrets that in a population of upwards of half a million of people, "many of them living under notoriously unhealthy conditions, only 73 direct complaints should have been made to him during the last three months on matters concerning the public health." On the other hand, 1912 separate informations have been received from the chief constable, Mr. Malcolm Wood, showing what valuable services the police render, not only as regards the property, but the health of the community. With regard to the suppression of infection, 663 patients suffering from infectious diseases and badly isolated at home were removed to our local fever hospitals, 7790 infected articles of clothing were disinfected or burnt, 1552 rooms were fumigated, and the walls and ceilings of 1969 rooms were washed with a solution of chloride of lime and afterwards fumigated. By female district visitation 9934 "house-to-house" visits to poor people were paid during the last quarter; 540 special inquiries were made on behalf of the medical officer of health into cases of death; and 382 special reports were made to him on sanitary defects discovered in the course of daily visitation. Three districts, those of Deansgate, Chorlton South, and East Hulme, are at present unfortunately without female health visitors. The points specially noted are dilapidation, condition as to dirt or cleanliness, overcrowding, and the presence of sickness. As would be anticipated, two districts of the old township, Ancoats and the Central, are the worst in the city. Great disparity exists apparently in regard to the "incidence of sickness"; in the district of Angel Meadow only 4 per cent. of the houses contained sick inmates last quarter, while in West Hulme 59 per cent. were so circumstanced. Was it that in Angel Meadow the sick were generally taken to the hospitals, while in West Hulme they were treated at home? The average death-rate in the fifteen districts visited is much higher than that of the city generally, ranging from 25·1 in St. George's East to 50·9 in Angel Meadow. In West Hulme it is 34·7, showing that the low incidence of sickness in the former does not give an accurate notion of its salubrity.

The average weekly number of paupers relieved last quarter by the guardians of the Manchester township, which has an estimated population of 147,138, was 3872, of whom 3453 received in-door and 419 out-door relief, the numbers in the last quarter of 1893 being 3560 and 492 respectively. It must be remembered that the long and severe frost we have just passed through did not begin till quite the close of the year, and did not influence the amount of distress in the last quarter of 1894.

Influenza.

Manchester has not escaped the visitation in an epidemic form of this tantalising and too often fatal disease. So far, however, it has been of a milder type than in previous invasions. During the week ending March 2nd there were 5 deaths due to influenza complicated with some form of lung disease, and of these 3 occurred in the Manchester Workhouse. In the course of the next week, ending March 9th, the deaths assigned to it were 20, all the cases being of a complicated nature, and 9 of these occurred in the workhouse. In 2 other cases influenza was put down as a secondary cause of death. The medical officer of health has issued a placard containing "Precautions against Influenza," which has been extensively posted throughout the city.

Dr. Tatham's Report on the Health of Greater Manchester for the years 1891-92-93.

This report has been waited for with much interest and will repay not reading merely, but careful study. It is an example of statistical information only to be fully appreciated perhaps by experts; but even those of us who are not senior wranglers may gradually acquire confidence, for the checks and counterpoises—the qualifying circumstances—are so carefully examined and allowed for that one feels safe in the guidance of a master who will keep clear of the pitfalls and fallacies that have led to the saying "figures will prove anything." Most interesting and ingenious are the applications of the Manchester life tables (which will long remain witnesses to Dr. Tatham's unwearied energy) to the various problems of vital statistics. Their practical value as supplying accurate tests of sanitary progress or regress is abundantly shown.

The Sanitary Inspectors' Association.

Mr. Francis Vacher, medical officer of health for Cheshire, read a paper on the Inspection of Food before the Sanitary Inspectors' Association at Manchester on March 16th. He said that horseflesh was sold as beef, but that no other deception of that nature appeared to be prevalent. The difference between the bones and fat of the ox and horse made it easy to distinguish the meat, and consequently it was usual to remove both the bones and the fat from horseflesh which was to be sold as beef. Various symptoms of disease and decomposition in the flesh of several animals were then described with a view to the recognition of unsoundness. Fashion had placed game in an exceptional position, and it was possible that an officer might not be supported by the magistrates in seizing it even when greatly decomposed. There appeared to be hardly any doubt that serious illness had been caused by eating oysters which had lain in water contaminated with sewage.

March 18th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Season's Epidemic.

AMONG various branches of the public service, the Postal employés appear to suffer much from illness. Of 1500, which comprises the whole of the Postal staff in this town, there are 115 on the sick list; these comprise 72 from the postal division and 43 from the telegraphic department. The majority of cases are ascribed to influenza; it is remarkable that the advent of any kind of ailment at the present time is readily classed under this cause.

Death under an Anæsthetic.

A man aged twenty-eight succumbed whilst under the influence of a mixture of chloroform and ether at the General Hospital on the 14th inst. He was the subject of empyema, and was about to be operated on when he suddenly stopped breathing. A necropsy revealed a dilated and feeble heart, and the verdict was given in accordance with the medical testimony, the coroner, Mr. Oliver Pemberton, remarking that the risk of anæsthetics was small, only 2 persons out of every 7000 anæsthetised meeting with death.

Suicides of Octogenarians.

An old man, aged eighty-one, was charged with attempting to commit suicide recently. The example of previous cases appears to have exercised some influence in this direction, since there have been in a short time four cases of men about the same age resorting to this method of terminating their days.

March 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Drunkenness in Newcastle-upon-Tyne.

THE Right Worshipful the Mayor, Alderman W. H. Stephenson, recently publicly stated that Newcastle was the most drunken town of its size in England, and he quoted official statistics in proof of his statement. The chief constable has just issued his report on the state of crime during the year 1894, in which the amount of drunkenness coming before the magistrates is dealt with. It appears that 6042 cases were investigated by the bench, being an increase of 703 cases over those of 1893; 1347 of these cases referred to non-residents of the city. The mayor has been roundly taken to task for his observations, but he maintains that his conclusions are correct, and certainly so far he seems to have the best of the argument. Why Newcastle should be more drunken than other similar towns it is

difficult to understand. The amount of serious crime in Newcastle is small. The chief constable says in his report "three-fourths of the crime of this country is occasioned by drunkenness." How does it happen that in the most drunken town in England the amount of serious crime is not larger than it is—is not in proportion to the amount of drunkenness? It is true nearly half the indictable offences in Newcastle are due to drink, and the proportion of indictable offences is high in Newcastle. It would seem to be a fair inference that while drink leads to the minor forms of crime, it is not the cause of serious crime—such, for instance, as that which came before the Lord Chief Justice at the late Liverpool Assize. From such serious crime Newcastle is, and always has been, remarkably free.

A Sidelight on Pauper Immigration.

For the sum of £37 10*s.* the master of the steamer *Palatine* contracted to bring from Alexandria to Boston thirty-eight Jews exiled from Russia. The contract was that the exiles should supply their own food on the voyage. After the vessel had been cleared the Jews came on board, and the vessel at once put to sea, on Jan. 31st, 1895. There was no accommodation of any kind for the Jewish party, which consisted of men, women, and children. They were to sleep on deck. The vessel was delayed on its passage by cold, wet weather, and the Jews were allowed to crawl into the coal bunkers, where they huddled together. The herrings and bread brought on board for the voyage by the miserable exiles were consumed, and only by purchase could food be obtained by the Jews, most of whom were destitute. Finally the party was landed at Boston, where no provision had been made for their arrival. It was stated during the investigation of this scandalous case before the magistrates at Newcastle-upon-Tyne, on March 19th, by the solicitor defending the master, "that there was a good deal of the same sort of thing carried on." The master was fined the full penalty, which, including costs, amounted to £81 8*s.* 9*d.*, and an order against the ship was granted. This case throws a lurid light on pauper immigration and suggests many questions of national importance.

A Health Exhibition will be held in Newcastle from May 13th to June 11th next. The general object of the exhibition will be, as set forth in the promoters' prospectus, to make obvious the enormous strides made by sanitary science during the past twenty years.

Newcastle-upon-Tyne, March 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Edinburgh.

THE influenza epidemic is waning, at least it is not so widespread. The death-rate, however, still keeps inordinately high, having reached 44 per 1000 last week. The intimations for the week included 5 fresh cases of small-pox, 52 of scarlet fever, and 435 of measles.

Close of the Winter Session in Edinburgh.

The medical classes in the University, the extra-mural school, and the women's colleges all close on Friday of this week. The session has probably been the longest on record, and it has on the whole been an uneventful one. The professional examinations in the University will begin next week.

The Aberdeen City Fever Hospital: Action against the Town Council.

A case was tried in the Court of Session, Edinburgh, before the Lord President and a jury, on the 26th and 27th ult., in which the pursuer, George Sutherland, claimed £500 damages in connexion with the death of his child in the Aberdeen City Hospital. The defenders were Mr. Gorman, one of the Aberdeen sanitary officers, and the Aberdeen town council. The jury gave a unanimous verdict for the defenders. As the case involves some important considerations relating to the laws of public health the charge by the Lord President to the jury has been printed in full by the Aberdeen town council as an appendix to the printed minutes and reports of their committees for the council meeting of March 18th. Considering the pursuer's position in life, the defenders did not ask for expenses, and besides defraying their own will have to pay the pursuer's taxed expenses.

March 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Outbreak of Influenza in Newry.

THERE has been quite an outbreak of influenza in epidemic form in Newry and district. The disease has broken out in the military barracks. Forty men have fallen victims to it. The hospital accommodation having been found inadequate several of the men are being treated in rooms allocated for the purpose. Fortunately, up to the present it is of a very mild type.

Professor Mahaffy.

It has been announced that the Senate of the University of Dublin will meet to-day, March 20th, at two o'clock, to elect a representative of Classis Secunda on the council in place of the Rev. Dr. Mahaffy, resigned.

The late Mr. C. H. Robinson.

At a recent meeting held by the proprietors of the late Ledwich School the following resolution was passed: "The proprietors of the late Ledwich School desire to offer to Mrs. Robinson and her family the expression of their sincere sympathy with them in their recent bereavement, and at the same time to place on record the sense of the great loss the proprietors have sustained by the recent death of their lamented and much-respected colleague."

Death of Mr. William Dyas.

It is with regret I have to announce the death of Mr. W. Dyas of Chicago, who met with a fatal accident by an incoming train on the Nickel-Plate-road, Chicago. William Dyas was born in Dublin on Nov. 4th, 1807. In his sixteenth year he entered Trinity College, Dublin. He graduated in 1830 at the Royal College of Surgeons in Ireland. In 1832 he received an appointment to the Cholera Hospital, county Kildare. Subsequently he was appointed Assistant Demonstrator of Anatomy at Trinity College, acting under Professor Harrison, of the University. In July, 1839, Mr. Dyas went to America and settled in Chicago, where for a time he acted as editor of the *Chicago Medical Journal*. He was eighty-seven years of age.

Simultaneous Ligature of the Subclavian and Carotid Arteries for Innominate Aneurysm.

An operation was performed by Mr. Coppinger at the Mater Misericordiæ Hospital on Saturday which caused much interest and was witnessed by a large audience of surgeons as well as of students. The patient, a man aged thirty-five, suffered from a rapidly growing aneurysm of the innominate, projecting upwards above his sternum and clavicle, and causing severe pain and other pressure symptoms. The third stage of the right subclavian was encircled by a ligature, and the carotid at the seat of election similarly dealt with. The vessels were now tied, one immediately after the other, the ligatures being of silk. Aseptic precautions were rigidly carried out, all the dressings, iodoform, &c. having been previously sterilised by prolonged exposure to dry steam, after the von Bergmann method. The patient was not apparently a satisfactory subject for the operation, being short-necked and full-blooded. He, moreover, had suffered for some weeks from severe laryngeal symptoms, as well as from the so-called "vagus pneumonia" due to pressure on the recurrent laryngeal and trunk of pneumo gastric nerves. I learn, however, that his temperature to-day (Wednesday) is normal, and that his progress is otherwise favourable.

The Protection of Infant Life.

The Dublin *Evening Echo* on Monday last contained an outspoken appeal for the alteration and amendment of the Burial Laws in Ireland. Under the various Acts for the registration of births and deaths in Ireland it is possible for interments to be made without a medical certificate as to the cause of death and even without registration. There are penalties, but they can be avoided; and it is the belief of our contemporary, and apparently a well-grounded belief, that this laxity has become a serious source of danger to child-life.

The Cork Ophthalmic Hospital.

The annual meeting of the subscribers to the Ophthalmic Hospital was held last week, and the report stated that in addition to the £4000 obtained by the late bazaar a further sum of £4000 was received in donations towards the building

fund. It was further stated that a site for the new hospital had been selected. Unfortunately, the proposed site met with anything but the unanimous approval of the subscribers present at the meeting. Lady Arnott led off the attack in a very vigorous speech. She pointed out that no exercise grounds would be available for the patients, and that tolerably close to the hospital would flow a stream from which at times are emitted certain malodorous fumes. Dr. Hobart, consulting surgeon, agreed with her ladyship as to the unsuitability of the site. On the other hand, Dr. Sandford, surgeon to the hospital, did not consider the position an insanitary one, and did not think they were likely to get a more suitable one. Many of the committee protested that the opposition to the site took them completely by surprise. Eventually the most sensible thing was done; the whole question was referred back to the committee, and as all concerned are actuated by a desire to do what will be best for the patients, I have no doubt a satisfactory solution will be soon arrived at.

Influenza at Cork.

Influenza has paid us an unwelcome visit, but so far it has not assumed a virulent type, though many of the cases are complicated by broncho-pneumonia. The city has been in a singularly healthy condition during the past two months, due, no doubt, to improved sanitation. In that connexion I may mention a fact of which our City Fathers are very proud. Domestic scavenging in Cork costs less than 1*d.* in the £, though Dublin citizens cannot have this done for less than 6½*d.* in the £.

Cork Lunatic Asylum.

A meeting of the board of governors of the Cork District Lunatic Asylum was held last week. The asylum contains at present 382 patients, while the estimated accommodation is 434. The hospital block, providing as it does most excellent accommodation for the treatment of the sick and infirm, has its utility greatly impaired by the want of a kitchen and by the loss of the infectious wing. Dr. Woods also brought under the consideration of the governors the advisability of increasing the medical staff as all authorities on asylum management now consider that there should be one medical officer for every 300 patients. The governors, having gone very carefully and at great length into the subject, decided, on the motion of Alderman Dale, to approve of the addition being made to the medical staff, but that the extent of the increase should be left to a meeting of the full board to determine. The meeting then adjourned.

A woman named Stapleton has died at Carey's Road, Limerick, at the age of 102. Within a brief time before her death she enjoyed excellent health and was in full possession of her faculties.

March 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Twin Tubal Pregnancy: Retention of Fœtus for Fifteen Years.

M. FOLET of Lille communicated to the Academy of Medicine on the 12th inst. details of the above extraordinary case. His patient is a woman now aged forty-nine years, who, having previously given birth to four children at full term, became, sixteen years ago, again pregnant. When the pregnancy had reached the ninth or the tenth month symptoms simulating labour occurred, blood and membranes being expelled, and the hæmorrhage persisting for six weeks. This strange occurrence led to the belief that no pregnancy had really existed. The abdomen remained, however, voluminous, but for fifteen years nothing further happened to disturb her until a year ago, when repeated attacks of peritonitis determined her admission into the Saint-Sauveur Hospital, Lille, where laparotomy was decided upon. The operation was laborious on account of the presence of numerous adhesions of the fœtal sac to the intestines. The sac was, nevertheless, excised almost entire, the too adherent fundus only being left *in situ* and stitched *en collerette* to the lower part of the abdominal incision. Recovery was complete in six weeks, no accident having occurred to retard it. The sac contained two fœtuses—one which had at its death attained the age of two or three months, and the other which had reached the full term of nine months—a phenomenon which is so extremely rare in tubal gestation that only six or seven examples are recorded. The fœtus exhibited at the Academy by M. Folet was not a lithopædion. Its tissues were supple, non-calcified, but were, nevertheless, as dense as cooked bacon. With the exception of certain alterations undergone, the tissues had retained their structure recognisable by the naked eye and under the microscope. The peculiar lardaceous degeneration above mentioned will be further investigated by Dr. Curtis, *professeur-agrégé* of Pathological Anatomy at the Lille Faculty.

The War against Alcoholism in France.

The Conseil Supérieur de l'Assistance Publique, having at the request of the Government deliberated over the advisability of establishing special retreats for the treatment of lunacy caused by alcoholic abuse, has sent in the following report, which I transcribe textually: "1. Que le gouvernement encourage la création d'établissements spéciaux pour les aliénés alcooliques et l'organisation de quartiers spéciaux dans les asiles. 2. Qu'une application plus rigoureuse soit faite des lois contre l'ivresse publique. Le Conseil Supérieur signale, en outre, aux pouvoirs publics l'utilité plus grande et plus pressante encore de rechercher et d'appliquer les moyens de prévenir l'alcoolisme."

March 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Meeting of the German Balneologists.

THE German Balneological Society held its annual meeting in Berlin from March 7th to 12th, Professor Liebreich presiding. In his inaugural address the president said that many valuable improvements in therapeutics had originated from this society. He mentioned especially the fresh-air treatment of tuberculosis introduced by the late Dr. Brehmer at Görbersdorf, which had up to now given the best results in this dreadful disease. In that society it would be unnecessary to state that pulmonary tuberculosis is not merely an infectious disease, but depends also upon the social condition of the population. Fresh air and good food have contributed more to the cure of sufferers than tuberculin and the other antitoxins invented by bacteriologists. Professor Litten then read a paper upon the Diaphragm Phenomenon. He has found that the movements of the diaphragm during respiration can be seen through the walls of the thorax and abdomen if the patient lies on his back near a window so that his body has full light on it. Under these circumstances one sees through the skin a kind of undulation descending with the inspiration from the sixth intercostal space down to the ninth rib, and sometimes to the costal arch, and ascending again with the expiration. Professor Litten pointed out the great importance of this phenomenon in cases of emphysema, pleurisy, &c., where the respiratory power of the lungs can be estimated from the extent of the above-mentioned undulation. Dr. Grödel of Nauheim then spoke on the Hydropathic Treatment of Arterio-sclerosis. He said that it is an error to say that hot baths would be harmful to such patients, although as a rule they are more than fifty years old. Although he had often ordered baths of 35° C. he had never seen apoplectic attacks during or after the bath. He advises his patients to stay only for five minutes in the bath and to put a cold compress on the head in order to remove the blood from the brain. Diseases of the heart took a considerable place in this year's proceeding. Professor Kisch (Marienbad) read a paper on Cardiac Irregularity caused by General Obesity, and Dr. Pospischill on the Hydrotherapy of Organic Heart Diseases. The latter mentioned the efficacy of this method, even in an advanced stage of the illness. The hydrotherapeutic treatment, he said, regulates the cardiac action, repairs the elasticity of the bloodvessels, and strengthens the heart muscle. Every form of heart disease is fit for this treatment, which can be performed not only in hospitals but also in the homes of the poor. A very interesting paper was that of Dr. Fürst (Berlin) on Inhalations at the Seaside. The good results obtained in cases of scrofulosis by inhalations of salt air in the salt-pits have induced him to try the same method at the seaside. For this purpose he proposes to build open halls to which the sea-water will be conducted in pipes and dispersed by an engine. In this way the air becomes mixed with the sea water, and the children who have to stay in the hall for several hours inhale an air

which contains a great percentage of salt. Dr. Lindemann of Heligoland approved Dr. Fürst's proposition, and remarked that his method would be useful also for patients suffering from chronic laryngitis. The meeting finally discussed the hygienic condition of the health resorts. A committee was elected, which made the following propositions. The municipal authorities of the health resorts should be asked to provide—(1) an efficient supply of good drinking water by aid of waterworks; (2) arrangements for artificial ice; (3) hospitals for infectious diseases; (4) establishments for the disinfection of goods &c.; and (5) public mortuaries. Dr. Ibell (Ems) proposed that every health resort should appoint a hygienic council of which at least one resident medical man should be a member. The propositions were unanimously adopted and the meeting then closed.

Curious Evidence of a Medical Officer.

A man who was brought before a jury of Berlin had promised a woman in the latest stage of tuberculosis to cure her within three months. He had ordered her a medicine for which he charged twelve marks, the real worth being only twenty pfennigs. A fortnight afterwards the patient died, and her family indicted the quack for fraud. At the trial Dr. Long, medical officer at the Berlin law courts, was asked by the defendant's counsel if it was not possible to cure "consumption." Dr. Long answered that it would be as easy to fetch a star from the sky as to find a universal remedy for this illness. The defendant's counsel asserted that his client was as persuaded of the curative effect of his remedy as Professor Koch was of tuberculin, and could, therefore, not be made responsible because it was a failure. Dr. Long answered that in his opinion they were, both Dr. Koch and the defendant, guilty of the same crime, and he did not understand the public attorney only prosecuting the little and not also the great thieves. This allusion caused the utmost sensation in the court. The judge said he was sorry he must blame Dr. Long for comparing a scientific authority like Professor Koch with a quack. The defendant was condemned to three months' imprisonment.

March 18th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Cases of Homicidal Mania.

HOMICIDAL mania has been assuming epidemic proportions in our hospitals, particularly in our lunatic asylums. In the Santo Spirito a nun of exemplary character and high professional worth was assassinated by a patient who owed her a quite imaginary grudge, and just the other day one of the most prominent of our citizens—a man respected and beloved throughout Italy, the Marchese Berardi — was brutally murdered in open day in the villa annexed to the Manicomio. As one of those officially interested in the asylum the Marchese was on duty, superintending a group of labourers employed in removing earth from the airing grounds, and he was just in the act of suggesting to a subordinate the propriety of laying a small *binario* (pair of rails) to facilitate the carting away of rubbish when he was suddenly assailed from behind by one of the labourers aforesaid. This man, who as a non-violent patient had been allowed to work in the open, dealt him with uplifted spade a murderous blow on the occiput, felling him to the ground. Bleeding profusely and absolutely unconscious, the Marchese, after the first hasty attentions of the resident physicians, was taken to one of the houses of which the villa is composed and was soon afterwards examined by Professor Paolo Postemski, who holds one of the chairs of Surgery in the Roman school. Trephining was at once performed, and in half an hour, during which he was assisted by Professors Bertini and Scalzi, Professor Postemski was able to give the following account of the injury: "Depression of the right parieto-occipital region, with fracture external to the depression. Fracture of the internal surface and disintegration of the cerebral substance. Subdural hæmorrhage. Probable fracture of the base of the skull. Prognosis very grave." His Excellency Dr. Baccelli arrived just as Professor Postemski was penning the last words of the bulletin, and, having heard the particulars, approved of the operation and also confirmed the very unhopeful prognosis. The Marchese never recovered consciousness, but lingered on till a little past midnight, when he expired. Meanwhile his assassin, who had been put under arrest, was examined and the following instructive history was elicited. He is a young man, Bruni by name, some twenty-seven years of age, and a Sabine by birth. He is of middle height, blonde of complexion, and with a prepossessing type of countenance. Of unknown parentage, he was brought up to an uncertain mode of life, working at odd jobs, till the age of nineteen, when he was sentenced to seven months' imprisonment for cutting and wounding, after which he underwent another term of incarceration for theft. In August of 1888 he entered as a conscript the 15th Regiment of Infantry, and about the close of his period of service he insulted and attacked his superior officer. Put on his trial he was found to be insane and shut up in the lunatic asylum. From this he was unaccountably set at liberty—unaccountably, I say, for the report of the resident physicians, dated 1892, was to this effect: "Alienazione cessata; persistente semi-imbecillità" (alienation ceased; persistent semi-imbecility). The latter condition ought certainly to have caused some kind of surveillance to be kept over him; but no. Set at liberty, as I have said, he soon gave symptoms of a recrudescence of his malady, so that for violent conduct in the Piazza del Popolo he was taken into custody by the Carabinieri, and his mental alienation having been once more duly certified he was again shut up in the lunatic asylum. Here he developed the so-called "persecution mania," and at first had to be safeguarded among those classed as "agitati" (violent). But in October last, having till then maintained a persistent calm, he was relegated to the class of "paranoici tranquilli" (peaceable lunatics) and employed, as we have seen, in rural labour. Interrogated by the director of the asylum, Professor Bonfigli, and the Quæstor, Signor Sironi, as to what induced him to attack the Marchese Berardi, he replied: "I had condemned the Marchese to death because once he had complained of my work." Successive interrogations elicited little more than this, that he was constantly being persecuted by "pezzi grossi"—personages in authority—among whom he classed "Cabinet Ministers, colonels, majors, and presidents," and added that he struck down the Marchese Berardi as one of those persecutors. And so he stuck to his text, till Professor Bonfigli and Signor Sironi made up their minds as to his case and relegated him to the class of the "agitati," taking the precaution (his menacing looks and language considered) to put him in a "camicia di forza" (strait-waistcoat). I need pursue the matter no further, except to add that about the same time another deed of violence was committed in the same asylum by one of the patients (an epileptic) dealing another of the same class a murderous kick on the abdomen, the result of which was death some hours afterwards.

The Management of the Manicomio.

A few comments will be in place as to the circumstances under which the Roman Manicomio has had to register such tragedies and the system under which these become possible. In some respects it has a record as honourable as any in Europe. It was one of the first on the Continent to adopt the non-restraint system inaugurated by Tuke. Thanks to its enlightened patron, the late Pope Pio Nono, the "bath of surprise," the shackles, the strait-waistcoat, and such like were either wholly done away with or had recourse to only under rare and special circumstances. The "out-door employment" system was freely introduced, and under such excellent superintendents as Dr. Viale Prelà and, more recently, Dr. Fiordispini the beautiful villas on the Janiculan were laid out for the reception of non-violent cases whose time (if paying patients) could be occupied in such intellectual or artistic pursuits as were congenial to them, or (if of the poorer or pauper class) by labour, agricultural or other. Repeated visits to this really delightful retreat convinced me of the thoroughness with which the non-restraint system had been carried out, and, on the whole, the success which had crowned it. But one defect always struck me, and not me only, but others who were admitted on the visiting list. That was, according to our British ideas, the insufficiency of attendants. Those who were on duty seemed in the highest degree capable; but they were inadequately supported. Now, if there is a *conditio sine quâ non* which, more than another, must be enforced in the treatment of lunatics it is this, that "the sense of being controlled" should never be absent from them. An over-awing

demonstration of surveillance is not absolutely necessary. It will be enough if the patient feels that, even in non-official garb, there are attendants who have their eye on him, and who are ready (reinforced at once, if need be, by others) to check any outbreak on his part. Just as on the high seas the man-of-war least often suffers shipwreck from its greater supply of hands, so in the lunatic asylum casualties are fewest where attendants, *en évidence* or in the background, are most in readiness. Now in the Roman Manicomio this chronic defect had been aggravated by recent administration. According to its most able and efficient superintendent, Professor Bonfigli, it is a fact that no fewer than thirty among the "sorveglianti" and "infermieri" (keepers and male attendants) had, for a temporary cause, been dismissed—some of them had been on the staff of the Manicomio for over twenty years—and that, at the time of the recent murderous outbreaks among the patients, the *personnel* was dangerously undermanned. It is said that the author of this proceeding was no other than the Marchese Berardi himself. If so, that estimable man has expiated by nothing less than his life an error in administration which, in hot-blooded populations generally, and particularly in their lunatic asylums, can never be committed with impunity.

March 16th.

Obituary.

LOUIS FLORENTIN CALMEIL, M.D.

OUR Paris correspondent writes:—"The survival up to the 11th inst. of the famous alienist will come as a surprise to the majority of those of your readers who are interested in mental medicine. This surprise will be fully justified when on turning to the chapter on general paralysis of the insane in physiological works we read such sentences as the following:—'This interesting but hopeless form of disease may be said to have been unknown until it was fully described in the admirable *mémoire* published by Calmeil in 1826. ..... In his later work, "Traité des Maladies Inflammatoires du Cerveau," 1859, he designates the disease "Periencephalitis chronica diffusa."' Again, 'In 1826 M. Calmeil gave a most complete account of it, and to him frequently is ascribed the merit of having been the discoverer.' Louis Florentin Calmeil, the *doyen* of French alienists, was born on Aug. 9th, 1798; he was, consequently, at his death in his ninety-seventh year. His father, a retired barrister, renounced practice early in his career and took up his residence at his country house at d'Yversay in Poitou. Here was born his third son, who was destined to become so famous as a 'mad doctor.' At the age of nine years he and an elder brother were placed in a house at Poitiers under the care of a trusted servant in order to pursue their classical education. He soon evinced a passionate liking for natural science. One day he informed his professor that he intended being a botanist, which infantile resolution did not prevent his being entered later as a student in the École Préparatoire de Médecine de Poitiers. While there he daily repaired to the hospital, where he soon became an assiduous attendant in the post-mortem room. Every spare moment he devoted to the study of plants and insects. The inevitable removal to Paris came in due time. In this new sphere his untiring industry quickly procured him the place of *externe des hôpitaux*. In this quality he was a frequenter of Dupuytren's wards. One day, carried away by a too close attention to the illustrious surgeon's utterances, he accidentally touched the bed of a patient who had just been operated on. Dupuytren thereupon seized him by the arm and shook him so violently that, terrified at such treatment, he procured his mutation to the Salpêtrière, where he worked under Rostan. This good-natured physician took a great fancy to young Calmeil and engaged him to take numerous notes of cases of partial softening of the brain. Appointed *interne*, he was sent to Charenton under Royer-Collard. He was then twenty-four years old, and he never left that hospital until fifty more years had elapsed. There he passed all his life—a life of devotion to his poor patients and to his researches into the nature of their diseases. The death of his loved master, Royer-Collard, deprived him of an influential friend; but he found in his successor, Esquirol, an equally ardent supporter. Calmeil became his right-hand man. Knowing that his *protégé* had during his sojourn at the Salpêtrière made a special study of hysteria and epilepsy, Esquirol requested him to write a *mémoire* embodying his observations. The task accomplished, Esquirol entered the *mémoire* for a prize he himself had founded. Félix Voisin and Calmeil were bracketed equal and shared the prize. Esquirol had frequently urged his master Pinel to found a private paying asylum, but the latter, pleading the infirmities of old age, persuaded his pupil to put the idea into practice. Calmeil entered with enthusiasm into the organisation of this new scheme; but when, later, Esquirol wished him to become his partner in the venture, he firmly declined in these words: 'Non, je n'accepte pas, car non-seulement je m'y ruinerais, mais, ce qui est pire, j'aurais ruiné mes co-associés. J'ai mon plan tout tracé et bien arrêté; je ne veux que le travail avec l'indépendance.' This disinterested programme he followed to the letter. His duties over, he would retire to a modest pavilion he called his hut, when after a few hours' sleep he would, winter and summer, wake before sunrise to write the works which have placed his name on the roll of honour as a psychologist. Appointed Inspector of Charenton, then Assistant Physician, he obtained the unsolicited distinction of the Cross of the Legion of Honour. At the death of Esquirol he was deemed by his *confrères* the best fitted to succeed him as Médecin-en-chef. But royal favour procured the post for another, and Calmeil continued his studies until 1848, when, terrified by the Revolution, his chief fled, and a vacancy was once more declared. This time Calmeil was more fortunate, being appointed to the female wards, while the men were placed under the care of Archambault. Soon after, his coadjutor having to retire, he was appointed Médecin-en-chef, a post he held for twenty-two years. In the accomplishment of his responsible duties he was ever gentle and dignified towards his pupils and subordinates, and most patient with his poor charges. It was during his tenure of the Physicianship-in-chief that he crowned his work by the publication of his treatise 'Maladies Inflammatoires du Cerveau.' This procured him promotion (to office) in the Legion of Honour. In 1872 Calmeil asked to be allowed to retire. He chose Fontenay-sous-Bois, in the Charenton district, as the place wherein to pass the evening of his life. Here in a pretty villa built specially for him, and which his friends and admirers christened 'La Maison du Sage,' he gave himself up to his favourite botanical studies and to his book and the notes he had accumulated during his sojourn at Charenton. Nothing delighted him more than a visit from some old pupil, become since famous perhaps. For some years past, senile weakness, while sparing his intellect, had deprived him of the strength necessary to enable him to take his favourite walks in the Vincennes woods, or in his garden. I append a list of his principal works, some of which are undoubtedly standard productions:—'De l'Épilepsie étudiée sous le rapport de son Siège et de son Influence sur la Production d'Aliénation Mentale' (Thèse, 17 juin, 1824); 'De la Paralysie considérée chez les Aliénés' (Paris, 1826. 8vo); 'Des Maladies de la Moelle Epinière' (Paris, 1839, 8vo); 'De la Folie considérée sous le point de vue pathologique, philosophique, historique, et judiciaire, depuis la Renaissance des Sciences en Europe jusqu'au XIX^e^ Siècle, (descriptions des grandes épidémies de délire simple ou compliqué qui ont atteint la population d'autrefois et régné dans les monastères; exposé des condamnations auxquelles la folie méconnue a souvent donné lieu; Paris, 1845, 2 vols. 8vo); 'Traité des Maladies inflammatoires du Cerveau' (ou histoire anatomo-pathologique des congestions encéphaliques, du délire aigu, de la paralysie générale ou péri-encéphalite diffuse, à l'état simple ou compliqué, du ramollissement cérébral local aigu et chronique, de l'hémorrhagie cérébrale localisée récente ou non récente; Paris, 1859, 2 vols. 8vo); 'Du Ramollissement partiel du Cerveau (par Rostan; Obs. par Calmeil).' One of the first to utilise the microscope in the study of mental derangements, he always betrayed satisfaction at the improvement effected in an instrument which he prophesied would render great service in this particular branch of medicine. Ever a most conscientious student, he would often allow years to elapse before he would publish communications of the correctness of which he was not absolutely sure. He thoroughly believed that every neurosis or form of lunacy corresponded to a definite lesion which it behoved the student to discover. His name will for ever remain associated with the disease, general paralysis of the insane, which he succeeded in establishing as a clinical and pathological entity. Although a member of the Société Médico-Psychologique, he rarely

attended the meetings, preferring to remain at Charenton amongst his books and patients. In Calmeil we may salute a man who lived all his days a true student—disinterested, modest, and consequently great. I feel that these few commemoratory words give but a dim picture of such a personality, but I venture to hope that their perusal will not be found uninteresting."

WILLIAM BOYLE COGHLAN, M.A., M.D. Q.U.I., M.R.C.S. ENG.

GENERAL regret has been occasioned among a wide circle of friends by the death of this popular and highly respected gentleman, who passed away on March 8th at his residence in York-place, Oxford-street, Manchester. He was born in county Cork about sixty-six years ago, and was the first scholar in Queen's College, Cork. He subsequently studied divinity, and having graduated in 1853 as M.A. at Trinity College, Dublin, he became curate of Chirbury Parish Church, in Shropshire, as mentioned in our columns last week. Having unhappily lost his voice, he obtained permission from his ecclesiastical superiors to enter the medical profession, and qualified himself for this new career by studying at his old university and at St. Thomas's Hospital. In 1864 he became a Member of the Royal College of Surgeons of England, and in 1868 he graduated as M.D., eventually settling in practice in Manchester. He nevertheless was able to continue his pulpit ministrations, and was well known and highly esteemed as a preacher in many churches of the city and suburbs.

EVAN PIERCE, M.D. ST. AND., F.R.C.S. EDIN., L.F.P.S. GLASG., L.S.A., J.P.

BY the death of Dr. Evan Pierce, who passed away at his residence in Denbigh on March 15th, the profession of medicine in North Wales loses one of its best-known exponents. Dr. Pierce was born in 1808 in a farmhouse a few miles from Denbigh, and on leaving school commenced his medical education by apprenticeship to Drs. Yorke-Jones and Lodge of Denbigh. He subsequently studied in the medical schools of London, Edinburgh, and Paris, and in 1836 gained the diplomas at the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Apothecaries' Society of London. In 1832, while a student at Edinburgh University, the young Welshman distinguished himself by his active participation in the work of the cholera hospitals in Edinburgh and Musselburgh. Returning to his home in Denbigh he found that the same epidemic was prevailing there, and that the mortality was very heavy. His services to his native place on this occasion were remarkable, and were publicly acknowledged by his being presented with an oil painting of himself. Having subsequently settled in practice in Denbigh, he speedily attained success, and in 1844 graduated as M.D. at the University of St. Andrews. About the same time he became a member of the Denbigh town council and in 1866 was elected mayor, an office which he held for five years in succession. In 1848 he became coroner for Denbighshire, and retained the appointment up to the time of his death. In this capacity he had to hold the inquest on the victims of the Abergele accident on the London and North-Western Railway in 1868, when more than thirty lives were lost, partly through the collision and partly through the ignition of mineral oil with which a truck was loaded. He was a public benefactor to his town, for he supported a hospital of fifteen beds, and presented to the borough a public pleasure ground and a public hall, acts of munificence which involved an outlay of several thousand pounds. In commemoration of his mayoralty the townspeople in 1875 erected in the pleasure ground a limestone column seventy-three feet in height, surmounted by a statue of him in white marble. He was remarkably devoted to field sports as long as his bodily energy permitted, and was in every respect a staunch Welshman.

JOHN BALBIRNIE, M.A., M.D. GLASG.

WE regret to announce the death of Dr. Balbirnie, which took place on March 11th at Keyworth, near Plumtree, Nottinghamshire, as the result of an attack of influenza. He was a man of much culture and literary ability, and some forty years ago gained a considerable reputation as a writer on medical subjects, principally in connexion with hydropathy. Born in Glasgow in 1810, he in due course entered the arts classes of the University there, graduating as M.A. in 1830. His tendency being towards the medical profession, he continued his studies in this direction at the same school, eventually taking the M.D. degree in 1836. Previously to graduation he spent some time in improving himself by observing the practice at the great medical schools in Paris, and this, no doubt, partly accounted for the fact that at Glasgow University he gained the Brisbane Bursary of £200 awarded to the most meritorious of the theses presented by the medical graduates of the year. Balbirnie on this occasion took as his subject "The Speculum applied to Organic Diseases of the Uterus and its Appendages." His best-known work was probably "The Water Cure in Consumption and Scrofula," published in 1854. He had, however, previously brought out "The Philosophy of the Water Cure" in 1845, and in 1863 he wrote "The Physiological Basis and Curative Effects of the Turkish Bath." His last work appeared in 1870 on "Inhalation as a Branch of Scientific Therapeutics and a new Apparatus for giving it Effect." Dr. Balbirnie practised in various towns in England and Scotland; a great part, however, of his long life was spent in Sheffield. Keyworth, where he died, had been his residence for the last seven years. He has left two sons, both of whom are in the medical profession.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Waldau of Berlin, one of A. von Graefe's earliest assistants.—Dr. Marjolin, honorary surgeon to the Paris hospitals.—Dr. Larabrie, Professor of Clinical Surgery in Nantes.—Dr. F. R. Müller, formerly President of the Swiss Federal Medical Examination Commission.—Dr. A. Beketoff, formerly Professor of Surgery in the University of Kazan.—Dr. Bruno Mester, first assistant in the Breslau Medical Clinic, at the age of thirty-one.—Dr. F. W. Lorinser, formerly President of the Council of Hygiene of Lower Austria.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Florence:* Dr. Tamburini of Modena has been appointed Professor of Clinical Psychiatrics. Dr. Roster has been promoted to the Ordinary Professorship of Hygiene.—*Jena:* Dr. H. Haeckel, *privat-docent* in Surgery, has been appointed Professor.—*Lyons:* Dr. Augagneur has been appointed Professor of External Pathology.—*Paris:* Dr. Mangingalli of Catania has been appointed Professor of Midwifery and Gynæcology.—*Naples:* Dr. Pedicini has been recognised as *privat-docent* in Medical Pathology, and Dr. Farena as *privat-docent* in Medical Chemistry.—*Prague (German University):* Dr. Wölfler of Gratz has been appointed to the chair of Clinical Surgery in succession to Dr. Gussenbauer. *Bohemian University:* Dr. Pesina has been recognised as *privat-docent* in Pathology and Therapeutics.—*Vienna:* Dr. Julius Schnitzler has been recognised as *privat-docent* in Surgery.

THE St. Patrick's Festival Dinner of the Irish Medical Schools' and Graduates' Association was held on St. Patrick's Eve, March 16th, at the Café Monico, Dr. H. Phillips-Conn, President of the Association, being in the chair. Among those present were Sir William MacCormac, Sir B. W. Richardson, Dr. Clement Godson, Dr. Gilbart Smith, Mr. Keetley, and Mr. Edmund Owen. There were also a number of ladies present. Songs were sung and national airs played on the Irish pipes.

ROYAL INSTITUTION.—Among the Lecture Arrangements after Easter we notice the following:—Professor George Forbes, three lectures on Alternating and Interrupted Electric Currents; Professor E. Ray Lankester, F.R.S., four lectures on Thirty Years' Progress in Biological Science; Professor Dewar, F.R.S., four lectures on the Liquefaction of Gases; and Dr. William Huggins, F.R.S., three lectures on the Instruments and Methods of Spectroscopic Astronomy (the Tyndall Lectures). The Friday evening meetings will be resumed on April 26th, when a discourse will be given by Dr. John Hopkinson, on the Effects of Electric Currents in Iron on its Magnetisation.

DENTAL HOSPITAL OF LONDON.—Mr. Henry Harben, J.P., has, in addition to £500 already contributed by him, promised a further munificent donation of £1000 towards the amount required for building the new Dental Hospital in Leicester-square, conditionally upon a sum of £13,000 being contributed by the public within reasonable time so as to enable the committee to commence the building.

BEQUESTS AND DONATIONS TO HOSPITALS.—The governors and directors of the Bank of England and Mr. Richard Benyon have respectively sent a donation of £100 to the Metropolitan Hospital, Kingsland-road.—A Retford lady has anonymously given £100 to the Retford Cottage Hospital for surgical purposes.—The collections for the local medical charities for the year 1894 of the workpeople of Messrs. J. S. Fry and Sons, Bristol, amounted to £502 6s. Of this sum £115 each were apportioned to the Bristol Royal Infirmary and General Hospitals and £169 10s. to the Bristol Dispensary.—The late Mr. Robert Smith, of the firm of Smith, Payne, and Smith, bankers, London, has bequeathed £500 to the Hertford Infirmary.—The late Mrs. Church Dixon has bequeathed £500 (free of legacy duty) to the general funds of the Belgrave Hospital for Children, Gloucester-street, London.—The board of management of the British Home for Incurables has received a contribution of £300 in memory of the Rev. W. Heygate Benn; and Mr. H. C. Hartley has also sent to the Home a donation of £150.—The late Mr. C. W. Savage of Westbury-upon-Trym has bequeathed £200 each to the Bristol General Hospital and the Bristol Royal Infirmary, and £100 each to the Children's Hospital and British Eye Hospital.—The late Mr. W. F. Rawdon, of Clifton, York, has bequeathed £1000 each to the Middlesex Hospital (Female Cancer Ward) and the York Hospital, and £2000 to the York Dispensary.—Mrs. James Packe has sent a donation of £500 to the funds of Queen Charlotte's Lying-in Hospital, Marylebone road, London.—An anonymous donor has sent a donation of 300 guineas to the Royal Hospital for Diseases of the Chest, City-road, London.—The late Mr. J. H. Worth of Retford has bequeathed £100 (free of legacy duty) to the Retford Dispensary and Cottage Hospital.—Lady Kortright of Roden House, Brentwood, has sent a donation of £7000 to the Grosvenor Hospital for Women and Children, Vincent-square, Westminster, in aid of the building fund.—Mr. Herbert H. Sharland, late of Thavies-inn, Holborn, London, has bequeathed £1000 each to the North Devon Infirmary (Barnstaple), St. Luke's Hospital, Old-street, London, Guy's Hospital, St. Thomas's Hospital, the Royal Free Hospital (Gray's-inn-road), the Hospital for Sick Children (Great Ormond-street, Bloomsbury), and the Royal Albert Orphan Asylum, and £200 to the Barnstaple Dispensary.—The late Mr. John H. Brain Kenridge of Chew Magna, Somersetshire, has bequeathed £200 to the Bristol Royal Infirmary and £100 to the Bristol General Hospital.—The late Mr. James Price, of Barcombe, Paignton, Devon, has bequeathed £1000 each to Guy's Hospital, St. Thomas's Hospital, St. George's Hospital, Charing-cross Hospital, the London Hospital, the Westminster, King's College, Middlesex, and the Royal Free Hospitals, the North London or University College Hospital, and the Royal Hospital for Incurables, West Putney, and £500 each to the Brompton Cancer Hospital and the Torbay Infirmary at Torquay. The testator also bequeaths £1000 each to the Liverpool Infirmary, the Liverpool Northern Hospital, the Liverpool Southern Hospital, and the Dispensaries at Liverpool.—The following donations have been made to the special fund now being raised for St. Thomas's Hospital, London:—The Directors of the Bank of England, 500 guineas; Messrs. Barclay and Perkins, £1000; the Cannon Brewery Company, London, 100 guineas. The London City Companies have contributed to the same fund as follows: the Mercers' Company, 500 guineas; the Clothworkers' Company, £500; the Grocers' Company, £250; the Leathersellers' Company, 200 guineas; the Drapers' Company, 100 guineas; the Carpenters' Company, 100 guineas; and the Salters' Company, 100 guineas.—The Mercers' Company has voted a grant of 50 guineas to the Surgical Aid Society (offices, Salisbury-square, London).—The Fishmongers' Company has granted £50 guineas to the East London Hospital for Children, Shadwell, E.—The Leathersellers' Company has sent a donation of 50 guineas to Guy's Hospital.—The Goldsmiths' Company has voted £200 to Guy's Hospital and £100 to the North-Eastern Hospital for Children, Shoreditch.

AT the meeting of the Royal Society on Thursday, March 14th, Professor Engelmann of Utrecht delivered the Croonian Lecture on the Nature of Muscular Contraction.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 6th, Dr. J. S. Tew, President, being in the chair.—Mr. Anderson read a paper on Some Cases of Renal Surgery, and detailed six cases in which nephro-lithotomy had been performed, and six of nephrorrhaphy. In one of the former a large branched stone was removed from the right kidney, and a small one from the left ureter by extra-peritoneal ureterotomy. All the cases recovered. Of the nephrorrhaphies two were of recent date and the ultimate result could not be recorded, but the remaining four had been entirely relieved of their symptoms, the kidneys remaining fixed.—The President and Dr. Cattle, Mr. Tompsett, Dr. Watson, and Dr. Tresidder took part in the discussion of the subject, and Mr. Anderson replied.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—The annual meeting of this hospital was held at the Mansion House on March 15th, the Rev. Arthur Powell (chaplain) presiding, in the absence of the Lord Mayor, who was unfortunately prevented by illness from being present. The Lady Mayoress, however, was among the company. The in-patients treated during the year were 591, and the attendances of out-patients exceeded 32 000. The financial position of the hospital was far from satisfactory. Invested capital to the amount of £750 had to be realised in order to meet current expenses, and there nevertheless remained liabilities of about £260. An earnest appeal for aid was made to the public, especially to the merchants and bankers of the City, the hospital having been originally established in the City and removed to its present position in Waterloo-road only in 1825.

PRESENTATION.—Mrs. Agnes N. Hicks of Taddington, Dunstable, Bedfordshire, has been presented, as a memorial of her late husband, Dr. Charles C. Hicks, of Wokingham, with a beautiful carriage clock, bearing this inscription: "To the memory of the late Dr. Hicks, from the poor of Finchampstead." An illuminated framed address was at the same time presented, of which the following is a copy: "Presented to the widow and son of the late Charles Cyril Hicks, M.D., with timepiece. 'We, the undersigned, representing the poorer inhabitants of Finchampstead, request your acceptance of the accompanying testimonial to the memory of the late Dr. C. C. Hicks, as a slight token and acknowledgment of his unwearied and self-denying labours amongst us during his fourteen years of devoted service as a medical officer, February, 1895.'"

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—The annual meeting of this institution was held on March 16th at the hospital buildings, St. Michael's-hill, Bristol, the High Sheriff presiding. The report showed that 918 children and 40 women had been admitted as in-patients during 1894, while the attendances of out-patient children amounted to 23,000, and of women to 14,000. The hospital has a measles ward, to which 62 children were admitted; among these there were 8 fatal cases, of whom 7 were aged two years and under. The finances of the institution are fairly satisfactory, the receipts for the past year having slightly exceeded the ordinary expenditure. Six legacies were received, amounting to a total sum of £1069. At Weston-super-Mare there is a convalescent home in connexion with the hospital, and on it there is still a heavy liability.

FOOTBALL CASUALTIES.—On the 14th inst. a member of the Swansea team succumbed to injuries sustained to the spine during a match between the Swansea and Newport teams on the 23rd ult.—The following accidents occurred on Saturday last. While playing a match between the Leeds and Altofts Clubs at Altofts a member of the Leeds team fractured one of his legs and was removed to the infirmary.—At Sandhurst a half-back who was playing for the Lennox team against the Royal Military College fractured his clavicle.—A youth, aged eighteen years, while playing for the Craigpark Club, at Kenny Hill, Glasgow, "became ill," and was carried to a surgeon's, "but was found to be dead from overexertion."—A young man, aged twenty-one years, of the Leith Athletic Club, fractured his left leg during a League match in Glasgow, and a player in a match, also in Glasgow, fractured his leg.

MR. PETER SWALES, Public Vaccinator, Sheerness, has been awarded the gratuity for successful vaccination for the eleventh time.

THE annual dinner of the Medical Society of London was held in the Whitehall Rooms of the Hôtel Métropole on March 8th, the President, Sir William Dalby, being in the chair. The evening passed most pleasantly, and some excellent singing by Dr. Frederick Roberts, Dr. Samuel West, and others enlivened the proceedings.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The annual meeting of governors and subscribers was held at the hospital on March 12th, Lieutenant-Colonel Thorneycroft presiding. The state of the finances caused some anxiety, as there was an indebtedness amounting to £2694. The chairman expressed his satisfaction at the providing of wards for the treatment of diseases peculiar to women; a mortuary has also been constructed, the necessity for it having long been felt.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on March 14th, 1895, Dr. Pye-Smith, F.R.S., President, being in the chair. Mr. George Pernet read the notes of a case of Acute Fatal Pemphigus. Dr. Stowers read for Dr. Waldo of Clifton notes of a case of Acute Nephritis with Uræmia, attended by an Erythematous Rash and Extensive Desquamation. The following cases were exhibited by Mr. Sheild: a Female Patient with Chancre on Right Cheek; Dr. Payne, Erythema Induratum Scrofulosorum (or Bazin's Disease); Dr. Abraham, Bazin's Disease, Adenoma of Alæ Nasi, Pustular Prurigo, Lupus Erythematosus; Dr. Eddowes, Folliculitis Decalvans, Alopecia of Scalp, Lichen Ruber Planus; Dr. Stowers, Lupus Vulgaris, on buttock, Lupus Erythematosus with result of treatment. The President, Mr. Buxton Shillitoe, Mr. Hutchinson, and Dr. Radcliffe Crocker took part in the discussions which followed.

LONDON AND DISTRICT POOR-LAW OFFICERS' ASSOCIATION.—The third annual dinner of this association will be held at the Holborn Restaurant (King's Hall) on Friday, April 5th, 1895, at 6.30 P.M. Mr. Walter H. Long, M.P., late Parliamentary Secretary to the Local Government Board, has kindly agreed to take the chair, and he will be supported by Members of both Houses of Parliament and several distinguished visitors. Mr. Long having brought in the Superannuation Bill and obtained an early date for the second reading, it is hoped that a large number of officers and friends will attend on this occasion, so as to make the dinner a record one, and the committee, relying on such support, have taken the newly opened King's Hall for the occasion. The hon. secs. to the dinner committee, to whom all communications should be made, are Mr. Francis H. Birch (Holborn Union, E.C.) and Mr. Morton F. Cadman. We are requested to state that evening dress will be optional.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The alleged Increase of Insanity.

MR. KENNY has given notice that on an early day he will call attention to the progressive increase in the numbers of the registered insane in all countries, and move "That steps be taken towards the appointment of an International Commission to inquire into the subject from an etiological standpoint, and to consider if any and what measures can be taken to arrest the spread of the disease, especially through hereditary transmission and intemperance, admittedly the two principal factors in the causation of insanity."

Habitual Drunkards.

The Manchester and Salford Social Questions Union has presented to Parliament a petition "for legislation for registration of convicted habitual drunkards, and for restraining owners of licensed premises from harbouring or serving such habitual drunkards."

Baths and Washhouses for the City of London.

Mr. A. C. Morton has had the good fortune to get through all its stages in the House of Commons the Bill to enable the Commissioners of Sewers of the City of London to provide baths and washhouses within the City boundaries. The Bill empowers the Commissioners by a resolution passed at a special meeting to apply the Baths and Washhouses Acts, 1846 to 1882, and to do so without the sanction or approval of any vestry or other body whose sanction or approval is made necessary by these Acts. It is, however, provided that no bylaw made by the Commissioners in this connexion shall have legal force until approved by the Local Government Board, and, further, an appeal to the sessions is given to any person aggrieved by any bylaw, or order, or direction, or appointment of the Commissioners.

Proposed Amendment of the Public Health Acts.

A Bill, introduced into the House of Commons by Sir Albert Rollit, seeks to amend the Public Health Acts with respect to sewers. It gives local authorities power to recover any expenses incurred by them in cleansing, maintaining, repairing, or replacing private sewers from the owner of the premises for the drainage of which the sewers are used. If there is more than one owner involved, then the apportionment of the expenses is to be made by the surveyor of the local authority or, in case of dispute, by a court of summary jurisdiction. An important clause in the Bill gives the local authority power to enter premises without notice in case of emergency, and do what is necessary in the interests of public health.

The Relief of Distress in Ireland.

The Bill of the Government to make temporary provision for the relief of distress in Ireland provides that at any time before Sept. 1st next the Local Government Board for Ireland may, if they think fit, authorise the board of guardians of any Poor-law union to administer relief in food or fuel, out of the workhouse, for any time not exceeding two months to any poor persons resident in the union. It also indemnifies any boards of guardians who may have done this already with the sanction of the Local Government Board, and declares that no electoral disability shall be incurred by any person receiving this special out-door relief.

HOUSE OF COMMONS.

THURSDAY, MARCH 14TH.

The Employment of Children.

Mr. Shaw-Lefevre, replying to a question put by Sir John Gorst, said that his attention had not been called to the fact that any children in the Poor-law schools had been put to labour before the age of eleven years. There was, he believed, some evidence to that effect before the committee on these schools, but it appeared that in such cases the industrial work to which the children were put was of a domestic character and very different from work in factories. He proposed, however, to issue an order prohibiting the employment of children below the age of eleven as half-timers.

The Sanitation of Windsor Barracks.

Mr. Campbell-Bannerman, in answer to Mr. Hanbury, said that a full report was made half yearly with regard to the condition of the cavalry barracks at Windsor. The last report was dated Nov. 12th, but reports upon particular items of sanitation were constantly being made. The drainage of the barracks was not satisfactory, but a complete new system was in hand. Such of the work as could be done while the troops were in occupation was being pushed forward, and the remainder would be executed later in the season, when the barracks would be vacated for the purpose.

Pleuro-pneumonia in London.

Mr. Herbert Gardner, President of the Board of Agriculture, in reply to Sir Albert Rollit, said he was sorry to have to admit that pleuro-pneumonia was discovered a few days ago in the carcase of a cow brought from a cowshed in Spitalfields. The usual inquiries had been made, and the contact animals slaughtered, but no further cases of disease had been found.

The Indian Cantonments Question.

In the course of a debate on the Army, Sir Richard Temple, who has held high office in India, made a strong speech on this subject. He condemned the new cantonment regulations, saying that they had resulted in an enormous increase in disease. The return of Sir George White, he said, mentioned one-third, but he was afraid that one-half of the men were suffering from disease, which might easily have been made preventable, and which was effectually prevented until the House interfered from a false sense of morality. If war broke out in India it might be necessary to send out a whole fresh army corps to repair the ravages caused by the disease. Morality had benefited not at all. India was placed under heavy additional charges in deference to Lord Roberts and other authorities, and yet all that was entirely nullified by having 30,000 or 40,000 men diseased, owing to the new regulations. Every military officer in India was dead against these regulations, which had also received the protests of the Council and others. They should not be doing their duty to their fellow-subjects in India if they hesitated to speak out. Their speaking out might possibly give offence to some, but they acted under a grievous misapprehension. They had been the means of inflicting great evils on their fellow-countrymen—evils which would last not for a year or two, but probably for a lifetime.

FRIDAY, MARCH 15th.

The State of the Army.

Mr. Campbell-Bannerman, Secretary of State for War, speaking on the first of the Army Estimates, gave the House an account of the work of his department during the past year and the state of the army. He reported most satisfactory progress in the vital matter of recruiting. They still, he said, filled up their numbers with growing lads below the standard, but they found that a large proportion of these—about two-thirds—had in a few months of steady life, drill, and good feeding reached the standard. The record of the army in 1894 in the matter of health was good. The admissions to hospital among the home troops were considerably below those of the previous year, and the

death-rate was only 3·59 per 1000. In connexion with the mobilisation work Mr. Campbell-Bannerman said that five bearer companies and five field hospitals were mobilised at Aldershot and the Curragh, associated with the other arms of the service in the important duties which would devolve upon them in war. These manœuvres were most instructive to the staff and the other officers, as well as to the department from which they were primarily undertaken. They hoped to repeat these exercises, perhaps on a smaller scale, yearly, in order that the bulk of the Medical Staff Corps now serving might be trained in the work.

MONDAY, MARCH 18TH.

The Reformatory Ship "Clarence."

Mr. Asquith, in reply to Sir George Baden-Powell, said that the conclusions come to after the inquiry into the condition of the reformatory ship *Clarence* were substantially that there was a failure on the part of the committee to visit the ship with sufficient frequency and regularity; and that with regard to the outbreak of small-pox which occurred in November last the Secretary of State was of opinion that no blame was attached to the captain for insufficient precautions having been taken, but after carefully considering the report and the evidence he thought the responsibility must rest with the medical officer, and he had expressed to the committee his opinion that they should reinstate the captain in command of the *Clarence*, and he trusted that steps would be taken by the committee in future to prevent the recurrence of the condition of things which had necessitated the recent inquiry.

Colour-blindness among Railway Servants.

Mr. Bryce informed Sir John Leng that railway companies were not legally compellable to subject their servants to eyesight tests for colour-blindness. The subject, however, was of great interest and importance to the companies and the travelling public, whose interests obviously required that adequate tests for colour-vision should be applied.

The Epidemic on board the "Britannia."

On this subject Mr. E. Robertson, answering a question put by Sir Henry Howorth, said that the sanitary condition of the *Britannia* was at present considered excellent. Frequent inspections of the ship and cadets had been made and every precaution taken to ensure as perfect a hygienic condition as possible. The origin of the late epidemic was distinctly traceable to a cadet who had been exposed to infection previously to joining the ship. Three deaths occurred, one in the person of a colonial cadet from Jamaica, who was undoubtedly affected by the late severe weather; another had been the subject of heart disease, and the third succumbed to severe acute bronchitis. The epidemic might now be regarded as practically at an end.

TUESDAY, MARCH 19TH.

Kitchen Boiler Explosions.

Mr. Bryce, replying to Mr. Weir, said that the principal causes of these accidents were well known, and he was at present considering whether some means might not be adopted of warning householders as winter approached of the measures to be adopted to prevent explosions.

The Opium Commission.

When the House was in Committee of Supply discussing a vote for the expenses of temporary Commissions, Sir E. Ashmead-Bartlett raised the question of the Opium Commission. He was glad, he said, that the expenses of the Commission would be borne by this country, because the people of India did not want the inquiry, which was not in their interest. The result, he believed, would show the absurdity of the anti-opium agitation, and would prove that the use of opium in India, far from being injurious, was in the great majority of cases beneficial to the people who used it. Mr. Cohen said the Commission would be useful if it dispelled the ideas entertained on this subject by many sincere but misinformed and deluded persons.—Mr. Caine said he did not object to those with whom he was associated being called faddists, but as a matter of fact they did not want the Commission, and voted against the Government on the subject.—Sir John Hibbert explained that the report of the Commission had been sent to India for the signature of some of the members, and would be presented to Parliament as soon as it was returned.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on this subject resumed their inquiry on Tuesday, March 19th, under the presidency of Sir Walter Foster.

The only witness they examined at this sitting was Mr. J. C. Lovell, member of a firm of butter importers in London and Manchester, who came forward in his individual capacity and as representing the Provision Trade Section of the London Chamber of Commerce and the London Butter Association. Speaking with wide and long experience he said that a great amount of butter adulteration prevailed. In the case of his own firm they had found it necessary to take steps to protect themselves from large quantities of adulterated butter coming from France. They succeeded in getting numerous prosecutions in that country, and in this way put down the adulteration to a very large extent. Lately there had been an association of the London butter merchants formed for the purpose of taking up this question. He did not in the least object to margarine. On the contrary, he regarded it as a most necessary and good article of food, and he would not interfere in any way whatever with its honest sale; but he did object to butter mixtures, of which enormous quantities were made and sold. He was of opinion that it should be an offence against the law to ally butter and margarine in a mixture. It was this mixing of butter and margarine that opened the door to fraud and injured the butter trade. He was aware that under the Margarine Act any mixture that contained margarine must be described as margarine, but the law was not respected. Many men who sold margarine cared nothing for the penalties under the Act, and when they were imposed upon them did not alter the course of their trade in any way. He suggested that the fines should be much heavier, and that for the third offence imprisonment should be inflicted. He also suggested that the manufacturer of margarine and margarine mixtures and the wholesale merchant and retailer should be licensed, his licence to be exhibited on his premises. In London there were many persons who were known to buy margarine, and who did not sell it—that was to say, did not sell anything by the name of margarine. He considered it would be unjust and unreasonable to impose any restriction upon the colouring of butter, because in certain districts and at certain seasons it was absolutely necessary to colour it. Most of the evils he complained of would long ago have disappeared had the existing law been vigorously carried out. For example, the Margarine Act gave the Customs authorities power to take samples of goods in transit, and they had never done so except upon information given them by persons in the trade. Now, in his opinion there should be systematic examination at the port of entry. Then there was the neglect and carelessness of the local authorities and their inspectors. In some places one was inclined to say that the inspector winked at offences, and in others it was no doubt true that the inspector worked under great difficulties. For instance, the people knew him at once by his uniform, and when he went into a shop and asked for butter he most certainly got it, although ordinary customers might not find themselves so fortunate. His suggestion was to have travelling inspectors who were not known in the districts. He strongly objected to margarine or mixtures being packed as they were now, in known butter packages. The manifest object of the present system was to assist the retailer in selling the margarine or mixture as pure butter. He found that every known package for the carriage of butter had been imitated by people dealing in margarine or mixtures. In this connexion he suggested that these articles could very well be confined, as was the case in Denmark, to one package. The London Butter Association had only been at work for a month, but the mere fact of its establishment had done good. The association employed inspectors who were told to go anywhere they liked to detect fraud, and already there had been a number of convictions. Within the last two years a system had sprung up of retailers mixing butter and margarine on their own premises by the use of machines specially made for the purpose. It was difficult to detect fraud here, because the quantities made were very small. As to the water to be allowed by law in butter, he thought 17 per cent. would be a perfectly safe maximum.

The Committee then adjourned.

The Committee met again on Wednesday, March 27th, with Sir Walter Foster in the chair.

Mr. R. H. Slater, shipper of butter from Rennes in Brittany, said he had come to the conclusion that the facility with which the adulteration of butter in France was carried on arose from the admitted incompetence of French analysts to detect a percentage of margarine of less than 10 per cent. French shippers, taking advantage of this, were careful to put in at least 10 per cent. of margarine, secure, as they were, against detection. There was a law in France to prevent the mixing of butter and margarine, but it was of no practical advantage. They had also a law prohibiting the sale of margarine as butter, and requiring the exhibition of the words "margarine," "oleomargarine," or "grease" where these substances were used, but this law could be evaded in a number of ways. He himself, in his own business, had been invited to buy margarine which the sellers assured him could not be detected in Brittany butter in a less proportion than 15 per cent., and he knew very well that large quantities of margarine were received in France by shippers of butter. There was so strong a feeling about the injuriousness of this competition among honest butter shippers in France that they had declared to the Government that unless it was prepared to help them with efficacious legislation, they would be obliged to imitate their less scrupulous competitors, or see themselves ruined. "The French Government," he might say, "had taken steps to prevent the use of margarine in hospitals and public institutions, on the ground that it was injurious to health." What he recommended was that the English Government should approach the French Government, and bring such pressure to bear as would make it decide to pass stringent laws against the margariners, and see that they were applied all round. He thought there should be a regular system of analysis at the ports of entry for butter, or reputed butter, coming from such countries as Holland and Belgium, and the heavier fines should be inflicted upon offenders.

Cross examined by Mr. Whiteley, witness expressed the individual opinion that margarine was injurious to health.

By the Chairman.—In his view the reason why the French Government did not interfere was that the houses who dealt in margarine were very powerful, and not that their interference would involve dearer butter and butter substitutes for the people of France. At the present moment in the towns of France the people paid very much more for French butter than did the people of England for the same butter.

Mr. J. T. Horner, who represented the Dairy Trade and Can Protection Society, gave evidence as to the analysis of milk. He told how out of 2229 samples, no fewer than 724 were found to fall short of a standard of 12 per cent. total solids, and he strongly advocated the adoption of a low standard to meet the varying condition and quality of cows. If the constituent parts were fixed they should not be more than 8·50 per cent. and 2·50 per cent. At present there was no legal standard, and in prosecutions they had to depend largely upon the particular idiosyncrasy of the analyst.

The Chairman read to the Committee a memorial which had been received from the London Butter Association, presenting the views of that body. The substance of the memorial will be found in the report of the evidence given by Mr. Lovell.

Mr. Kilbride, one of the members of the Committee, made complaint that in certain prosecutions in England for watering butter use was being made of inaccurate statements of evidence given before this Committee.

The Chairman said that the Committee could do nothing to prevent this, but reminded the hon. member that it was open to any one to procure the Blue-book containing the true record of the evidence taken.

The Committee then adjourned until Tuesday, March 26th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALLEN, JOSIAH., M.R.C.S., has been reappointed Medical Officer of Health for the Belper No. 1 Sanitary District.

BEATTIE, R., M.D., M.Ch. Irel., M.R.C.S., has been appointed Honorary Medical Officer to the Dewsbury and District General Infirmary.

BREW, R. W., M.B., B.Ch., B.A.O. Dubl., has been appointed Medical Officer for the Enniskerry Dispensary District.

CALVERLEY, J. E. G., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Metropolitan Hospital.

COOMBES, GEO. NOBLE, L.R.C.P. and S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Government of His Highness the Rajah of Cochin, South India.

CUNLIFFE, T. V., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Manchester Royal Infirmary.

DOCKRAY, H. S., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Manchester Royal Infirmary.

DUN, H. W., M.B., M.S. Edin., has been appointed Resident Assistant Medical Officer and Dispenser at the Workhouse, Sheffield Union.

FLEGG, F. A. MARTIN, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., has been appointed House Surgeon to the Seamen's Infirmary and General Hospital, Ramsgate, and Visiting Surgeon to the Ramsgate and St. Lawrence Royal Dispensary.

FLINT, T. B., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Manchester Royal Infirmary.

GAYLOR, EDWARD, L.R.C.P. Edin., L.F.P.S. Glasg., L.M., has been reappointed Medical Officer of Health for the Belper Rural Sanitary District.

HAMILTON, J. C., M.B. Dubl., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Rathdown Union Workhouse.

HOARE, WILLIAM WALLIS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Chief Medical Officer to the Hospitals and Estates of the New London Borneo Tobacco Company, Limited, British North Borneo.

HUGHES, R. T., M.R.C.S. Eng., L.R.C.P., has been appointed House Surgeon to the Manchester Royal Infirmary.

HUGO, J. H., L.R.C.P., M.R.C.S., has been appointed Assistant Medical Officer to the East Dulwich Infirmary.

JOB, H. PERCY, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Newark Town and District Hospital, vice Matterson.

LAWRENCE, A. E. AUST., M.D., has been reappointed Physician Accoucheur to the Bristol General Hospital for a third period of ten years.

LLOYD, F. J., F.C.S., F.I.C., has been reappointed a District Agricultural Analyst for the County of Wiltshire, under the Fertilisers and Feeding Stuffs Act, 1893.

MACKINTOSH, ANGUS, M.D., L.F.P.S. Glasg., &c., has been reappointed Medical Officer of Health to the Chesterfield Rural District Council, and also to the Urban District Councils of Clay Cross and Dronfield.

MELLAND, C. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Manchester Royal Infirmary.

MCDOUGALL, P., B.Sc. Lond., M.B., Ch.B. Vict., has been appointed House Surgeon to the Manchester Royal Infirmary.

NUNN, THOMAS WM., F.R.C.S. Eng., Consulting Surgeon to the Middlesex Hospital, has been appointed Consulting Surgeon to the London Skin Hospital, 40, Fitzroy-square, W.

PULFORD, HERBERT, M.A., M.B., C.M. Cantab., has been appointed Third Assistant Medical Officer at the Worcester County and City Lunatic Asylum.

RICHARDSON, W. J., M.D., M.Ch. Irel., B.A.O., has been appointed Honorary Medical Officer to the Dewsbury and District General Infirmary.

SHARPE, W. C., M.B. Edin., has been appointed Senior Physician to Smedley's Hydropathic Institution, Matlock.

SKERRITT, E. MARKHAM, M.D. Lond., F.R.C.P., has been reappointed Physician to the Bristol General Hospital for a third period of ten years.

STEWART, ROTHSAY C., M.R.C.S., L.S.A., has been appointed Medical Superintendent to the Leicestershire and Rutland Asylum, vice W. H. Higgins, M.B., resigned.

THOMPSON, ROBERT, M.D., B.S., has been appointed Honorary Ophthalmic Surgeon to the Ipswich Hospital, Queensland, and also Visiting Ophthalmic Surgeon to the Blind Institution, Brisbane, Queensland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSTAPLE UNION.—Medical Officer to the Sick Poor within the parishes of Ilfracombe, Morthoe, Bittadon, and West Down. Salary £70 a year, upon certain conditions, but midwifery fees allowed. Applications to the Clerk, Barnstaple.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants. Applications to the Clerk, Bridewell Hospital, New Bridge-street, E.C.

BLOOMSBURY DISPENSARY.—Physician. An honorarium of £105 is annually voted to the physician. Applications to Mr. C. E. Baker, 12, Bloomsbury-street, W.C.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon for twelve months. Salary £80 per annum, with furnished apartments, board and attendance.

BRADFORD INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £110 per annum, with board and residence.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's-road, Brighton.—Non-Resident House Surgeon. Salary at the rate of £52 per annum.

CAMBERWELL HOUSE, 33, Peckham-road, Camberwell. — Assistant Medical Officer, unmarried. Salary to begin at £100 a year, with board, lodging, and washing.

CHARING-CROSS HOSPITAL, London.—Assistant Physician.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield. Junior House Surgeon, unmarried. Honorarium £40 per annum, with board, lodging, and washing.

CITY ORTHOPÆDIC HOSPITAL, Hatton-garden, E.C.—Honorary Assistant Surgeon.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary to commence at £100 a year, with prospect of an annual rise of £25 up to £200, and further increase according to promotion, together with furnished apartments, board, attendance, and washing.

EAST LONDON HOSPITAL FOR CHILDREN, Glamies-road, Shadwell, E — House Physician. Board, lodging, &c. provided.

GLAMORGAN COUNTY ASYLUM, Bridgend. — Junior Assistant Medical Officer; single. Salary £100 a year, with board (no beer or wine), lodging, washing, and attendance.

HOLBORN UNION.—Medical Officer of the Union Schools at Mitcham, Surrey. Salary £100 per annum, non-resident. Applications to the Clerk to the Guardians, Holborn Guardians' Office, Clerkenwell-road, E.C.

HOSPITAL FOR WOMEN, THE (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

LEEDS UNION.—Assistant Medical Officer for the Workhouse, Schools, and Infirmary, situated in Beckett-street, Leeds. Salary £100 per annum, with board, washing, apartments, and attendance. Applications to the Clerk, Union Offices, East-parade, Leeds.

LEICESTERSHIRE AND RUTLAND ASYLUM.—Assistant Medical Officer, unmarried. Salary £150, increasing £10 yearly to £200, with board, lodging, and washing. Applications to the Clerk to the Visitors, 10, New-street, Leicester.

LINCOLN COUNTY HOSPITAL, Lincoln.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrarship. Salary £100 per annum.

LONDON HOSPITAL MEDICAL COLLEGE, THE, Mile End, E.—Assistant Demonstrator of Anatomy. Salary £30 per annum.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer, for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich. — Junior Assistant Medical Officer. Salary £110 per annum, increasing £10 annually to £150, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E. — Physician. Applications to the Secretary, Office, 27, Clement's-lane, E.C.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer.

SURREY COUNTY LUNATIC ASYLUM, Brookwood, near Woking.—Second Assistant Medical Officer. Salary £120, with board, lodging, attendance, and laundry, but not beer. Applications to the Medical Superintendent.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—House Surgeon for three years. Salary £100 per annum, with board, lodging, and washing in the Hospital. Also Honorary Physician.

WEST RIDING ASYLUM, Menston, near Leeds.—Third Assistant Medical Officer. Salary to commence at £130 a year, rising £10 annually to £160, with board and apartments.

YORKSHIRE COLLEGE, Leeds. — Demonstrator of Anatomy. Applications to the Registrar.

Births, Marriages, and Deaths.

BIRTHS.

CANE.—On March 13th, at Peterborough, the wife of Dr. Leonard Cane, of a daughter.

DAVIES.—On March 17th, at Oakland-terrace, Cricklewood, N.W., the wife of Dr. H. O. Davies, of a son.

EDGE.—On March 16th, at Maidenhead, the wife of A. J. Edge, M.B. Lond., of a son.

STOCKER.—On March 12th, at Weedon, Northamptonshire, the wife of E. Gaved Stocker, M.R.C.S., of a son.

MARRIAGES.

DENT—PARK.—On March 14th, at St. Barnabas', Kensington, Herbert Crowley Dent, of Cromer, Surgeon-Captain A.M.S. (retired), to May Burton, youngest daughter of the late Rev. John Park, formerly Vicar of Rampside, Lancashire.

SETON—ARMSTRONG.—On March 16th, at St. Simon's, Southsea, Surgeon-Captain Bruce Gordon Seton, I.M.S., eldest son of the late Lieutenant-Colonel A. R. Seton, R.E., to Elma, daughter of Lieutenant-Colonel F. H. Armstrong, Southsea.

DEATHS.

BALL.—On March 17th, at Cliff House, Stoke-upon-Trent, Daniel Ball, F.R.C.S., in his 96th year.

BANKS.—On March 11th, at Brooke House, Riseley, Bedford, Philip Humbley Banks, M.R.C.S., L.A.C., aged 62.

CHILD.—On March 15th, at Silverhowe, College-park, Willesden, Warwick Long Child, M.D., M.R.C.S., in his 39th year.

COATES.—On March 15th, at Summer Villa, Hythe, Kent, Surgeon-Major John Coates, M.D., late 24th Regiment, in his 69th year.

CUNLIFFE.—On March 12th, at St. Heliers, Jersey, William Shrubsole Cunliffe, M.R.C.S., in his 35th year.

N.B.—A fee of 4s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians. 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Bland Sutton: On a case of Tubal Pregnancy and one simulating Tubal Pregnancy.—Mr. L. A. Bidwell: An Operation for Extra-uterine Gestation involving Resection of Intestine.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. James Taylor: On Nervous Symptoms and Morbid Changes in the Spinal Cord in certain cases of Profound Anæmia (with lantern illustration).

WEDNESDAY.—HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Dr. Fortescue Fox: The Varieties of Rheumatoid Arthritis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. A. S. Morton: Ocular Injuries.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Law: Demonstration of Cases.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Joseph Griffiths: Observations on the Testis.

SOCIETY OF ARTS.—8 P.M. Dr. D. Morris: Commercial Fibres.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Impulsive, Homicidal, and Moral Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (XI.).

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Subject of Lecture: Fire.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4.30 P.M. Dr. Dundas Grant: Diagnosis and Treatment of Diseases characterised by Visible Changes in the Organs of Hearing.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. H. D. Rolleston: Suprarenal Capsules. (Third Goulstonian Lecture.)

WEDNESDAY.—WEST LONDON HOSPITAL (Hammersmith, W.).—5 P.M. Dr. Ball: Throat Cases. (Post-graduate Course.)

ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Joseph Griffiths: Observations on the Testis.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. W. Laug: Squint.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: Ringworm and Vegetable Parasitic Diseases.

SOCIETY OF ARTS.—8 P.M. Mr. Horace Wilmer: Modern Photogravure Methods.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. E. B. Tylor: Animism, as shown in the Religions of the Lower Races (I.).

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. Penrose: Cases in the Wards.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Mr. Victor Horsley: Surgery of the Nervous System.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. John Hopkins: Cases in the Wards.

SOCIETY OF ARTS.—4.30 P.M. Capt. F. E. Younghusband: Chitral and the States of the Hindu Kush.

ROYAL COLLEGE OF PHYSICIANS, LONDON.—5 P.M. Dr. G. Fielding Blandford: The Diagnosis, Prognosis, and Prophylaxis of Insanity. (First Lumleian Lecture.)

LONDON SKIN HOSPITAL.—8 P.M. Mr. Augustus Harbord: Syphilis, Acquired and Congenital.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Subject of Lecture: Air.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. E. Cotterell: Cancer of the Œsophagus.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Professor Joseph Griffiths: Observations on the Testis.

ROYAL INSTITUTION.—9 P.M. Prof. H. E. Armstrong: The Structure of the Sugars and their Artificial Production.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Lunacy Law.

ROYAL INSTITUTION.—3 P.M. Lord Rayleigh: Waves and Vibrations (V.).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 21st, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo	Maximum Temp. in Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Mar. 15	30·38	W.	46	44	71	54	36	...	Cloudy
,, 16	30·45	S.W.	46	44	73	55	43	...	Hazy
,, 17	30·35	W.	51	47	61	54	45	...	Overcast
,, 18	30·21	S.W.	43	41	74	59	40	...	Foggy
,, 19	30·03	W.	44	42	71	56	41	...	Overcast
,, 20	29·81	S.W.	51	49	67	57	44	0·06	Cloudy
,, 21	29·95	S.W.	48	47	60	54	45	0·10	Raining

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

NEWSPAPER THERAPEUTICS AND THE INFLUENZA EPIDEMIC.

JUMPING into a medical practitioner's carriage and eliciting his views with regard to influenza between one patient's house and another is the last device of that modern representative of the Inquisition, the newspaper interviewer. The victim in this instance was a practitioner who, in spite of his strong anti-alcoholic views, is a man with the quality of sweet reasonableness. But it is to be regretted that he should give material for such scrappy writing on a serious medical subject, especially to a contemporary which is one of the chief mediums of all the fads that harass and hinder scientific medicine in its attempts to get at the roots of disease. Medical men best consult the dignity of their profession and the interest of the public by doing their best in the sick-room and in the study, and leaving to others the interviewer.

Medicus is thanked for his communication.

THE EXAMINATION FOR THE NAVAL MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—Can any reader of THE LANCET inform me as to the best books to read for the Naval Medical Service examination in biology, physical geography, and physics? I shall be much obliged for the information.

I am, Sirs, yours faithfully,

March 18th, 1895. T. D. L.

BONESETTING IN THE NORTH OF ENGLAND.

WHETHER the difference be in the bones or the brains of the people of the north of England, they seem to have a great love for bonesetters. The *Carlisle Journal* in a recent number publishes the full names and addresses of twelve persons alleged during the preceding week to have sustained various specified fractures, dislocations, and bruises, and all of whom were attended by one bonesetter in a small Cumberland town called Aspatria. There seems to be a perfect epidemic—plentiful as influenza cases—of fractured collar-bones, dislocated knees, wrists, ankles, and shoulders. We must, however, perhaps, not take these diagnoses quite so seriously as our lay contemporary.

First Swiss Alpine Milk Exporting Co., Ltd.—It is obviously not correct to say *generally* that cane sugar &c. are very harmful to the body. We quite agree, however, with the remark in the succeeding paragraph relative to the "special objection" to cane sugar in infant feeding.

Mr. H. Percival Gaston.—Such quackery is not to be reached under the Medical Acts. It should be dealt with by the police authorities as contrary to public morals.

A MIDWIFE CENSURED.

AT the Chelsea town hall an inquiry was lately held into the death of an infant one week old, the illegitimate child of Thomas Rowles and Florence Jones of Chelsea. A midwife, Mrs. Harwood, attended, and said the child was feeble and not at full time. The coroner thought the evidence very unsatisfactory, and showed neglect on the midwife's part in not calling the attention of the medical practitioner to the child's condition. Dr. Campbell had visited the house, but was not informed of the weakly state of the child. The jury added to their verdict of "Death from syncope following premature birth" that the nurse acted without due care in failing to call the attention of the medical practitioner to the condition of the child.

Mr. D. H. Willey.—We never recommend individual practitioners. The regular medical attendant can advise upon the necessity of a consultation and upon the proper person to be consulted.

IS PARALYSIS AFTER A SORE-THROAT A PROOF THAT THE DISEASE WAS DIPHTHERIA?

To the Editors of THE LANCET.

SIRS,—It is asserted that if any doubt exists about the nature of a sore-throat the subsequent development of paralysis is proof that the disease the patient suffered from was diphtheria. I must traverse this statement, for I lately attended a case in an adult, and I diagnosed pseudo-diphtheria (unilateral septic follicular tonsillitis), and soon after recovery the patient developed paralysis of the soft palate, which lasted for about a week. There were three young children in the house at the time, and they were simply excluded from the sick room of their mother, who was the patient, but no other precautions were taken. No one in the house and no visitor took the disease. There was no marked depression of the system and no albuminuria. It is interesting to remember that women after childbirth suffer sometimes from polyneuritis, and that this form of paralysis has a septic origin.

I am, Sirs, yours faithfully,

HENRY ALSTON,
Trinidad, Feb. 21st, 1895. Trinidad Government Service.

THE CASE OF MR. C. B. TOWNSHEND.

	£	s.	d.
Previously acknowledged	51	1	0
M.B., B.Ch.	0	10	0
Mr. Chas. J. Woodd (Penge)	1	1	0
Dr. Dickinson (Bournemouth)	1	0	0
Mr. J. S. Curgenven (London)...	1	1	0
Fr. (Retford)	0	5	0
Fr. (London)	£0	5	0
Dr. A.W. Orwin (London)	2	2	0
Dr. J. J. Sundell (Finchley)	1	1	0
Dr. K. H. P. Williams (Llandudno)	0	10	0
A. B.	2	2	0
Sympathiser	1	1	0

Further subscriptions are earnestly desired to put the family in the way of self-support, which will require about £200. The Rev. H. Townshend, 41, King Henry's-road, N.W., will receive subscriptions.

A BISHOP AND QUACK TESTIMONIALS.

WE lately commented on the unseemliness of a clergyman, who has in the cure of souls a sufficient care, undertaking the heavy responsibility of recommending cures for the body. We have to-day to complain of something still more unseemly—viz., of a bishop (the Right Reverend the Bishop of Swansea) recommending a quack medicine—Mortimer's Croup-cough and Whooping-cough Mixture. Surely, the Bishop has not considered the matter and the risks of such diseases. We are unwilling to criticise so great an ecclesiastical authority; but we beg him to remember that his authority does not extend to medicine, and that by writing as if it did he damages the respect of reasonable men for the use of his authority even in his own sphere.

DEGRADATION OF MEDICAL SERVICE AT IPSWICH.

WE refer in another column to the wide tendency to degrade medical service by abuses of the club system. The following handbill is an illustration of our meaning:—

"THE PEOPLE'S MEDICAL AID SOCIETY, IPSWICH.

"The above Society is now being formed for the purpose of securing for its members sound medical advice, attendance, and a supply of medicine whenever they are in need of same. A weekly subscription of one penny for adults, and one half-penny for children will be charged. No entrance fees. Members will be entitled to immediate benefit providing thay are in a good state of health at the time of entry.

"It is hoped that sufficient members will be enrolled so as to enable the Society to have the exclusive services of its Medical Officer. All persons interested in the Society are kindly requested to make it known amongst their friends. Further particulars may be obtained from the Secretary, W. H. Baldwin, 25, St. Peter's Street, Ipswich."

We do not see the name of Mr. W. H. Baldwin in the Medical Register. We must content ourselves now with directing the attention of the profession in Ipswich to this wretched bill, and asking them fully to investigate its nature. Any medical man who lends himself to coöperation with Mr. Baldwin would do much to forfeit the respect of his professional brethren.

Miss Emma H. Frediwinsk.—We do not feel at liberty to give our correspondent the addresses in question without knowing more fully the nature of the responsibility she desires to share with the leaders of the profession.

"SULPHUR v. ANTITOXIN IN THE TREATMENT OF DIPHTHERIA."

To the Editors of THE LANCET.

SIRS,—I have no desire to enter into controversy regarding a remedy such as sulphur and the sulphites, of which I have a high opinion in the treatment of diphtheria; but I desire to acknowledge that Mr. Hawkins Cuthbert is quite correct in saying that there is no allusion to antitoxin having been used as an auxiliary and in combination with other remedies at the North-Western Fever Hospital in the report published in THE LANCET of Feb. 2nd. I was, indeed, surprised to notice this omission, since I was well informed that the original return contained a distinct statement to that effect, and I mentioned the circumstance, with an expression of regret at its suppression, in my last lecture on diphtheria, as recorded in the *Medical Press and Circular*, Feb. 13th, p. 160.

I am, Sirs, yours faithfully,

Mansfield-street, W., March 18th, 1895. LENNOX BROWNE.

A REGISTERED MEDICAL PRACTITIONER AND DENTAL ADVERTISING.

THE laudation of a dentist by a registered medical practitioner in the way of a testimonial printed in the form of a handbill, based on his observation of cases in which he acted as chloroformist, is a form of double advertisement which may be original, but is certainly entitled to no other praise. The author, Mr. George Gresswell, M.A. Oxford and Cape, possesses the combined qualifications of the Edinburgh Colleges and the Faculty of Glasgow. If he will consult these bodies on the taste of the handbill he will be enlightened.

ERRATUM.—At the end of the third line of Dr. Barron's letter on "The Influenza Epidemic" in our last issue, page 725, the words "in area" should be added after "very similar."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Weekly Budget, Medical Record, Echo, Eastern Morning News, Bury Guardian, Cork Weekly Examiner, Cheltenham Free Press, Birmingham Gazette, Sheffield Telegraph, Sussex Daily News, Newcastle Daily Chronicle, Irish Times, Ashton-under-Lyne Reporter, Norfolk Chronicle, Carlisle Express, Civil Service Gazette, Dundee Weekly News, Leicester Post, Chorley Guardian, Liverpool Mercury, Manchester Guardian, Derbyshire Times, Wolverhampton Chronicle, Western Morning News, Justice, Electrical Review (New York), City Press, Grimsby News, Western Gazette, Northern Whip, Horncastle News, Stockton Herald, Craven Herald, Leeds Mercury, Sanitary Record, Architect, Bristol Mercury, Morning, Mining Journal, Liverpool Daily Post, Reading Mercury, Yorkshire Post, Builder, Times of India, West Middlesex Standard, Pioneer Mail, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Local Government Chronicle, The Welshman, Surrey Advertiser, St. Bartholomew's Hospital Journal, West Middlesex Advertiser, Local Government Journal, Invergordon Times, Health, Cycle, Southampton Echo, Ilfracombe Chronicle, Evening Echo, Dublin, Long Eaton Pioneer, Kettering Guardian, &c., &c.*

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